INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

(317) 232-8603
(800) 451-6027
www.state.in.us/idem

PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY

Grede Foundries, Inc. - New Castle
2700 East Plum Street
New Castle, Indiana 47362

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T065-6354-00007	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: Expiration Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary gray iron and ductile iron foundry, which is a secondary metal production plant.

Responsible Official:	David Roycraft
Source Address:	2700 East Plum Street, New Castle, Indiana 47362
Mailing Address:	2700 East Plum Street, New Castle, Indiana 47362
General Source Phone Number:	317-521-8000
SIC Code:	3321
County Location:	Henry
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(a) four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3, and Furnace #4), with Furnace #1 and #2, both constructed in 1968, each having a maximum melt rate of 5.5 tons of ductile iron per hour, and Furnace #3 and #4, both constructed in 1976, each having a maximum melt rate of 5.0 tons of ductile iron per hour, all controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(b) one (1) charge handling system, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, exhausting through general ventilation;

(c) one (1) natural gas-fired scrap preheater, constructed in 1968, with a maximum heat input of 9.84 million (MM) British thermal units (Btu) per hour, and a maximum throughput of 21.0 tons of ductile iron per hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(d) one (1) inoculation process, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, with particulate matter emissions controlled by a collection hood ducted to one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(e) one (1) molding operation (ID No. Mold Line #1), constructed in 1993, consisting of the following:

(1) one (1) sand muller (ID No. Line #1 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 102.5 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(2) one (1) metal pouring operation (ID No. Line #1 Pouring), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(3) one (1) metal cooling operation (ID No. Line #1 Cooling), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(4) one (1) mold shakeout operation (ID No. Line #1 Shakeout) and associated shakeout conveyor, with a maximum ductile iron casting throughput of 10.25 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(5) one (1) mold punch up operation, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(6) one (1) casting transfer operation, constructed in 1993, consisting of the following:

(A) one (1) accumulating shaker, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand, exhausting through one (1) stack (ID No. S-1);

(B) one (1) degate shaker, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand, exhausting through one (1) stack (ID No. S-1);

(C) one (1) loader shaker; and

(D) one (1) belt conveyor, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand.

(7) one (1) casting finishing operation, constructed in 1993, consisting of the following:

(A) two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast), each with a maximum throughput of 5.125 tons per hour of ductile iron castings, both controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10);

(B) four (4) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, all controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10).

Note: all the above operations which exhaust through stack ID No. S-1, are controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3).

(f) one (1) molding operation (ID No. Mold Line #2), constructed in 1968, consisting of the following:

(1) one (1) sand muller (ID No. Line #2 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 107.5 tons per hour, all controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5);

(2) one (1) metal pouring operation (ID No. Line #2 Pouring), with a maximum throughput of 10.75 tons per hour of ductile iron, exhausting through one (1) stack (ID No. S-11);

(3) one (1) metal cooling operation (ID No. Line #2 Cooling), with a maximum throughput of 10.75 tons per hour of ductile iron, with the cooling area following the metal pouring operation exhausting uncontrolled through one (1) stack (ID No. S-12), the cooling area following the punch-up operation controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5), and the cooling area following the shake out operation exhausting through general ventilation;

(4) one (1) mold punch up operation, with a maximum throughput of 10.75 tons per hour of ductile iron and 107.5 tons per hour of sand, controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5);

(5) one (1) mold shakeout operation (ID No. Line #2 Shakeout) and associated vibrator conveyor, with a maximum throughput of 10.75 tons per hour of ductile iron and 107.5 tons per hour of sand, controlled by one (1) dust collector (ID No. Collector #2), exhausting through one (1) stack (ID No. S-2);

(6) one (1) casting finishing operation, constructed in 1968, consisting of the following:

(A) two (2) shot blast machines (ID Nos. #3 Shot Blast and #4 Shot Blast), each with a maximum throughput of 5.375 tons per hour of ductile iron castings, controlled by one (1) pulse jet dust collector (ID No. Collector #6) which exhausts through one (1) stack (ID No. S-6); and

(B) seven (7) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, with four (4) of the grinders controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10), and three (3) of the grinders controlled by one (1) pulse jet dust collector (ID No. Collector #6) which exhausts through one (1) stack (ID No. S-6);

(g) one (1) core sand mixer (ID North Core Sand Mixer), constructed in 1993, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 2) for particulate matter control which exhausts indoors, and two (2) core machines (ID 103 Core Machine and 106 Core Machine), constructed in 1972 and 1974, respectively, each with a maximum throughput of 5.1 tons of sand per hour, a maximum resin and sand mixture resin content of 1.0% for each machine, and a maximum DMEA usage rate of 4.8 pounds per ton of sand for each machine, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(h) one (1) core sand mixer (ID South Core Sand Mixer), constructed in 1993, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 3) for particulate matter control which exhausts indoors, and two (2) core machines (ID N-321 Core Machine and S-321 Core Machine), both constructed in 1976, each with a maximum throughput of 4.08 tons of sand per hour, a maximum resin and sand mixture resin content of 1.0% for each machine, and a maximum DMEA usage rate of 4.8 pounds per ton of sand for each machine, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(i) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines (ID Disa Core Machine (constructed in 1993), CB-1 Core Machine (constructed in 1992), CB-2 Core Machine (constructed in 1992), CB-3 Core Machine (constructed in 1995), CB-4 Core Machine (constructed in 1995), and CB-5 Core Machine (constructed in 2000)), with the Disa Core Machine having a maximum throughput of 1.77 tons of sand per hour, a maximum resin and sand mixture resin content of 1.1%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand, and each of the remaining five (5) core machines with a maximum throughput of 1.5 tons of sand per hour, with each of core machines CB-1 through CB-4 having a maximum resin and sand mixture resin content of 1.1%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand, and core machine CB-5 having a maximum resin and sand mixture resin content of 1.5%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand, all with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) Operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including pneumatic conveying as follows:

(1) One (1) pneumatically conveyed core sand reclaim system with one (1) dust collector for particulate matter control, exhausting to the general ventilation.[326 IAC 6-3-2].

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.3 Enforceability [326 IAC 2-7-7]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.4 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Supplement and Provide Information [326 IAC 2-7-4(b)] [326 IAC 2-7-5(6)(E)] [326 IAC 2-7-6(6)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality. [326 IAC 2-7-5(6)(E)]

(c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Compliance with Permit Conditions [326 IAC 2-7-5(6)(A)] [326 IAC 2-7-5(6)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; or

(3) Denial of a permit renewal application.

(2) Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act.

(c) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

B.9 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

B.10 Annual Compliance Certification [326 IAC 2-7-6(5)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ, may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.11 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.12 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

B.13 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed in compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(7)]

B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that

exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(d) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ, determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-4]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ, and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-7-4(a)(1)(D)]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-7-3]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as being needed to process the application.

(d) United States Environmental Protection Agency Authority [326 IAC 2-7-8(e)]
If IDEM, OAQ, fails to act in a timely way on a Part 70 permit renewal, the U.S. EPA may invoke its authority under Section 505(e) of the Clean Air Act to terminate or revoke and reissue a Part 70 permit.

B.18 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12 (b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes

for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1)(D)(i) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), (c), or (e), without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-7-20(b), (c), or (e) and makes such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-7-20(b), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC

2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

B.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy any records that must be kept under the conditions of this permit;

(c) Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ, the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-7-5(1)]

C.1 Particulate Matter Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(c)]

Pursuant to 326 IAC 6-3-2(c), the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on August 1, 1996. The plan consists of:

(a) Fugitive particulate matter emissions from the scrap yard shall be controlled by the following measures:

(i) Keep the area around the scrap piles clean.
(ii) Addition of water to paths on severe days (very dry), as required to limit dust generation.
(iii) Roll-up doors to scrap piles will be lowered as necessary to limit dust generation.

(b) Fugitive particulate matter emissions from paved roads and parking lots shall be controlled

by sweeping all paved roads at least once per month, weather permitting.

C.7 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.8 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4(d), (e), and (f), and 326 IAC 1-7-5(d) are not federally enforceable.

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.10 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.11 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.12 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within thirty (30) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within thirty (30) days, the Permittee may extend the compliance schedule related to the equipment for an additional thirty (30) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial thirty (30) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

C.13 Ambient Monitoring of Particulate Matter Less than 10 Micrometers (PM-10)

Pursuant to CP-065-2749-00007, issued on March 24, 1993, the owner/operator of this source shall continue its program for ambient monitoring of PM-10, established in CP-065-2749-00007, consistent with guidelines established in 40 CFR Part 50, Appendix J and the IDEM Quality Assurance Manual. The owner may petition to have this monitoring requirement removed if it is established to the satisfaction of the Commissioner that ambient PM-10 levels will continue to comply with National Ambient Air Quality Standards (NAAQS), without adverse effect to the community. To document compliance with this requirement, the Permittee shall maintain records of the data from the ambient monitoring of PM-10. Data from this monitor shall be submitted on a quarterly basis in the format approved by the Commissioner.

C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.16 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on August 1, 1996.

(b) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(c) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

C.17 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP);

All documents submitted pursuant to this condition shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.18 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as

follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.19 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of

the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate estimated actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate estimated actual emissions of other regulated pollutants (as defined by 326 IAC 2-7-1) from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The emission statement does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

C.21 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.22 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.23 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(a) four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3, and Furnace #4), with Furnace #1 and #2, both constructed in 1968, each having a maximum melt rate of 5.5 tons of ductile iron per hour, and Furnace #3 and #4, both constructed in 1976, each having a maximum melt rate of 5.0 tons of ductile iron per hour, all controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(b) one (1) charge handling system, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, exhausting through general ventilation;

(c) one (1) natural gas-fired scrap preheater, constructed in 1968, with a maximum heat input of 9.84 million (MM) British thermal units (Btu) per hour, and a maximum throughput of 21.0 tons of ductile iron per hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(d) one (1) inoculation process, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, with particulate matter emissions controlled by a collection hood ducted to one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from each of the electric induction furnaces #1 and #2 shall not exceed 12.85 pounds per hour, when each furnace is operating at a process weight rate of 11,000 pounds per hour.

(b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from each of the electric induction furnaces #3 and #4 shall be limited to 12.05 pounds per hour, when each furnace is operating at a process weight rate of 10,000 pounds per hour.

(c) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the charge handling operation shall be limited to 31.53 pounds per hour, when operating at a process weight rate of 42,000 pounds per hour.

(d) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the inoculation process shall be limited to 31.53 pounds per hour, when operating at a process weight rate of 42,000 pounds per hour.

(e) For purposes of demonstrating compliance with the PM emission limits for electric induction furnaces #1, #2, #3, and #4 and the inoculation process exhausting through Collector #7, the allowable PM emission rate from Collector #7 shall be limited to 81.33 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control device for the electric induction furnaces, the preheater, and the inoculation process.

Compliance Determination Requirements

D.1.3 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of this permit, in order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM testing on Collector #7 (stack S-7) when controlling the four (4) electric induction furnaces, the scrap preheater, and the inoculation process utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.4 Particulate Matter (PM)

The collection hood and dust collector (ID Collector #7) for PM control shall be in operation at all times when the four (4) electric induction furnaces and the inoculation process are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.5 Visible Emissions Notations

(a) Visible emission notations of the stack exhaust (ID S-7) for the four (4) electric induction furnaces, the scrap preheater, and the inoculation process shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collector (ID Collector #7) used in conjunction with the four (4) electric induction furnaces, the scrap preheater, and the inoculation process, at least once per shift when the four (4) electric induction furnaces, the scrap preheater, and the inoculation process are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the dust collector is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance

with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.7 Dust Collector Inspections

An inspection shall be performed each calender quarter of all bags controlling the four (4) electric induction furnaces, the scrap preheater, and the inoculation process when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.5, the Permittee shall maintain records of visible emission notations of the stack exhaust (ID S-7) for the four (4) electric induction furnaces, the scrap preheater, and the inoculation process once per shift.

(b) To document compliance with Condition D.1.6, the Permittee shall maintain once per shift records of the inlet and outlet differential static pressure during normal operation when venting to the atmosphere.

(c) To document compliance with Condition D.1.7, the Permittee shall maintain records of the results of the inspections required under Condition D.1.7.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(e) one (1) molding operation (ID No. Mold Line #1), constructed in 1993, consisting of the following:
- (1) one (1) sand muller (ID No. Line #1 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 102.5 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);
- (2) one (1) metal pouring operation (ID No. Line #1 Pouring), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);
- (3) one (1) metal cooling operation (ID No. Line #1 Cooling), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);
- (4) one (1) mold shakeout operation (ID No. Line #1 Shakeout) and associated shakeout conveyor, with a maximum ductile iron casting throughput of 10.25 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);
- (5) one (1) mold punch up operation, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);
- (6) one (1) casting transfer operation, constructed in 1993, consisting of the following:
  - (A) one (1) accumulating shaker, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand, exhausting through one (1) stack (ID No. S-1);
  - (B) one (1) degate shaker, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand, exhausting through one (1) stack (ID No. S-1);
  - (C) one (1) loader shaker; and
  - (D) one (1) belt conveyor, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand.
- (7) one (1) casting finishing operation, constructed in 1993, consisting of the following:
  - (A) two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast), each with a maximum throughput of 5.125 tons per hour of ductile iron castings, both controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10);
  - (B) four (4) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, all controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10).

Note: all the above operations which exhaust through stack ID No. S-1, are controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3).

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) Emissions of PM and PM-10 shall be limited as follows:

- (1) PM and PM10 emissions from the Mold Line #1 operations that exhaust through stack S-1 shall not exceed 18.27 and 10.12 pounds per hour, respectively;
- (2) PM and PM10 emissions from the Mold Line #1 operations that exhaust through stack S-10 shall not exceed 0.66 and 0.16 pound per hour, respectively;

(3) PM and PM10 emissions from the North Core Sand Mixer, listed in section D.4, shall not exceed 1.40 and 0.54 pounds per hour, respectively; and

(4) PM and PM10 emissions from the South Core Sand Mixer, listed in section D.4, shall not exceed 1.40 and 0.54 pounds per hour, respectively.

These limits will insure that PM and PM10 emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line in 1993, per CP 065-2749-00007) do not exceed the PSD major modification thresholds of 25 and 15 tons per year, respectively, so that the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 40 CFR 52.21 do not apply.

(b) VOC emissions from the Mold Line #1 Pouring and Cooling operations shall not exceed 0.14 pounds of VOC per ton of metal charged;

(c) VOC emissions from the Mold Line #1 Shakeout operation shall not exceed 1.2 pounds of VOC per ton of metal charged;

(d) The throughput of metal to Mold Line #1 shall not exceed 76,572 tons per twelve (12) consecutive month period.

The metal throughput limit and the VOC emission limits will insure that VOC emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line in 1993, per CP 065-2749-00007) from Mold Line #1 do not exceed the PSD major modification threshold of 40 tons per year. Therefore, compliance with these limits makes 326 IAC 2-2 (PSD) and 40 CFR 52.21 not applicable.

D.2.2 Particulate Matter (PM) [326 IAC 6-3]

(a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the operations of Mold Line #1 which exhaust to the dust collectors identified as Collectors #1 and #3, including metal pouring, metal cooling, mold shakeout, mold punch up, casting transfer, and sand handling, shall not exceed 52.49 pounds per hour when operating at a process weight rate of 225,500 pounds per hour, including metal and sand throughput.

(b) The particulate matter emissions from the two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast) and the four (4) grinders of Mold Line #1, which exhaust to the dust collector identified as Collector #10, shall not exceed 19.5 pounds per hour when operating at a process weight rate of 20,500 pounds of ductile iron castings per hour. The total particulate matter emissions from the four (4) grinders in the casting finishing operations of Mold Line #2 (listed in section D.3) that also exhaust to Collector #10 shall not exceed 9.6 pounds per hour when operating at a process weight rate of 7,120 pounds of ductile iron castings per hour. Therefore, the total PM emissions from Collector #10 shall not exceed 29.1 pounds per hour.

The pounds per hour limitations were calculated with the one of the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.2.3 Opacity [326 IAC 5-1]

(a) Pursuant to CP 065-2749-00007, issued March 24, 1993, visible emissions from the Mold Line #1 sand handling and casting finishing operations shall be considered in compliance with 326 IAC 5-1 provided that fugitive particulate matter emissions, measured as opacity, shall not exceed twenty percent (20%) opacity. Point source emissions from controlled processes are limited to ten percent (10%) opacity.

(b) Pursuant to CP 065-2749-00007, issued March 24, 1993, the following conditions shall apply:

(i) Good housekeeping and equipment maintenance procedures shall be implemented;
(ii) Emissions shall be minimized in receiving, handling, and shipping operations by appropriate methods. These may include but need not be limited to, dust collection systems, windscreens, baffles, restricted hopper openings, enclosed transfer points, flexible drop spouts and/or sleeves; and
(iii) Emissions shall not create a nuisance or a violation of 326 IAC 6-4.

D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Based on a BACT analysis submitted on September 16, 1992, as part of the construction permit application for CP 065-2749-00007, BACT for the #1 Mold Line Pouring and Shakeout operations shall be the following:

(a) VOC emissions from the Mold Line #1 Pouring and Cooling operations shall not exceed 0.14 pounds of VOC per ton of metal charged;

(b) VOC emissions from the Mold Line #1 Shakeout operation shall not exceed 1.2 pounds of VOC per ton of metal charged;

(c) The throughput of metal to Mold Line #1 shall not exceed 76,572 tons per twelve (12) consecutive month period.

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices for the Mold Line #1 operations.

Compliance Determination Requirements

D.2.6 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

Within 180 days after issuance of this permit, in order to demonstrate compliance with Conditions D.2.1 and D.2.2, the Permittee shall perform PM and PM-10 testing on stack S-1 controlling the metal pouring, metal cooling, mold shakeout, mold punch up, casting transfer, and sand handling operations and stack S-10 controlling the casting finishing operations utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.

D.2.7 Opacity [326 IAC 5-1] [326 IAC 6-3] [326 IAC 6-5]

Pursuant to CP 065-2749-00007, issued March 24, 1993, compliance with the opacity limits in condition D.2.3(a) shall be determined according to U.S. EPA Method 9.

D.2.8 Particulate Matter (PM)

(a) The two (2) dust collectors (ID Collector #1 and Collector #3) for PM control shall be in operation and control emissions from Mold Line #1 at all times that Mold Line #1 is in operation.

(b) The one (1) dust collector (ID Collector #10) for PM control shall be in operation and control emissions from the casting finishing operations of Mold Line #1, which include the two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast) and the four (4) grinders, at all times that these processes are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.9 Visible Emissions Notations

(a) Visible emission notations of the Mold Line #1 stack exhausts (ID Nos. S-1 and S-10) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.10 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the three (3) dust collectors used in conjunction with Mold Line #1, at least once per shift when Mold Line #1 is in operation when venting to the atmosphere. When for any one reading, the pressure drop across either of the two (2) dust collectors identified as Collector #1 and Collector #3 is outside the normal range of 0.5 and 5.5 inches of water or a range established during the latest stack test, or the pressure drop across the dust collector identified as Collector #10 is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.11 Dust Collector Inspections

An inspection shall be performed each calender quarter of all bags controlling Mold Line #1 when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional

when venting to the indoors. All defective bags shall be replaced.

D.2.12 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.13 Record Keeping Requirements

(a) To document compliance with conditions D.2.1 (d) and D.2.4(c), the Permittee shall maintain records of the monthly metal throughput to Mold Line #1.

(b) To document compliance with Condition D.2.9, the Permittee shall maintain records of visible emission notations of the Mold Line #1 stack exhausts once per shift.

(c) To document compliance with Condition D.2.10, the Permittee shall maintain once per shift records of the inlet and outlet differential static pressure during normal operation when venting to the atmosphere for each dust collector.

(d) To document compliance with Condition D.2.11, the Permittee shall maintain records of the results of the inspections required under Condition D.2.11.

(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.14 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.1(d) and D.2.4(c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(f) one (1) molding operation (ID No. Mold Line #2), constructed in 1968, consisting of the following:
- (1) one (1) sand muller (ID No. Line #2 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 107.5 tons per hour, all controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5);
- (2) one (1) metal pouring operation (ID No. Line #2 Pouring), with a maximum throughput of 10.75 tons per hour of ductile iron, exhausting through one (1) stack (ID No. S-11);
- (3) one (1) metal cooling operation (ID No. Line #2 Cooling), with a maximum throughput of 10.75 tons per hour of ductile iron, with the cooling area following the metal pouring operation exhausting uncontrolled through one (1) stack (ID No. S-12), the cooling area following the punch-up operation controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5), and the cooling area following the shake out operation exhausting through general ventilation;
- (4) one (1) mold punch up operation, with a maximum throughput of 10.75 tons per hour of ductile iron and 107.5 tons per hour of sand, controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5);
- (5) one (1) mold shakeout operation (ID No. Line #2 Shakeout) and associated vibrator conveyor, with a maximum throughput of 10.75 tons per hour of ductile iron and 107.5 tons per hour of sand, controlled by one (1) dust collector (ID No. Collector #2), exhausting through one (1) stack (ID No. S-2);
- (6) one (1) casting finishing operation, constructed in 1968, consisting of the following:
  - (A) two (2) shot blast machines (ID Nos. #3 Shot Blast and #4 Shot Blast), each with a maximum throughput of 5.375 tons per hour of ductile iron castings, controlled by one (1) pulse jet dust collector (ID No. Collector #6) which exhausts through one (1) stack (ID No. S-6); and
  - (B) seven (7) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, with four (4) of the grinders controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10), and three (3) of the grinders controlled by one (1) pulse jet dust collector (ID No. Collector #6) which exhausts through one (1) stack (ID No. S-6);

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Matter (PM) [326 IAC 6-3]

(a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the Mold Line #2 operations which exhaust to the dust collector identified as Collector #5 shall not exceed 52.98 pounds per hour when operating at a process weight rate of 236,500 pounds per hour, including metal and sand throughput. These operations include the mold punch-up operation, the metal cooling area following the punch-up operation, and the sand handling operations including the sand muller (ID Line #2 Muller), the return sand system, the casting and sand shaker conveyors, the sand transfer belt conveyors, and the sand shaker conveyors.

(b) The allowable PM emission rate from the Mold Line #2 operations which exhaust to the dust collector identified as Collector #2 shall not exceed 52.98 pounds per hour when operating at a process weight rate of 236,500 pounds per hour, including metal and sand throughput. These operations include the mold shakeout operation, one (1) casting cooling feeder conveyor, one (1) casting cooling transfer conveyor, and one (1) sand cooler and

associated feed belt.

(d) The allowable PM emission rate from the Mold Line #2 operations which exhaust to the dust collector identified as Collector #6 shall not exceed 20.13 pounds per hour when operating at a process weight rate of 21,500 pounds of ductile iron castings per hour. These operations include the metal cooling area following the shakeout operation, the two (2) shot blast machines (ID Nos. #3 Shot Blast and #4 Shot Blast) and three (3) of the grinders in the casting finishing operation, and one (1) casting cooling transfer conveyor.

(d) The allowable PM emission rate from the metal pouring operation of Mold Line #2 shall not exceed 52.98 pounds per hour when operating at a process weight rate of 236,500 pounds per hour, including metal and sand throughput.

(e) The allowable PM emission rate from the metal cooling area following the metal pouring operation of Mold Line #2 shall be limited to 52.98 pounds per hour when operating at a process weight rate of 236,500 pounds per hour, including metal and sand throughput.

The pounds per hour limitations were calculated with one of the following equations:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices for the Mold Line #2 operations.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

During the period between 30 and 36 months after issuance of this permit, in order to demonstrate compliance with Condition D.3.1, the Permittee shall perform PM testing on Collector #2 controlling the mold shakeout operation, one (1) casting cooling feeder conveyor, one (1) casting cooling transfer conveyor, and one (1) sand cooler and associated feed belt, Collector #5 controlling the mold punch-up operation, the metal cooling area following the punch-up operation, and the sand handling operations including the sand muller (ID Line #2 Muller), the return sand system, the casting and sand shaker conveyors, the sand transfer belt conveyors, and the sand shaker conveyors, and Collector #6 controlling the metal cooling area following the shakeout operation, the two (2) shot blast machines (ID Nos. #3 Shot Blast and #4 Shot Blast) and three (3) of the grinders in the casting finishing operation, and one (1) casting cooling transfer conveyor (Stack ID Nos. S-2, S-5, and S-6) utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.3.4 Particulate Matter (PM)

The three (3) dust collectors (ID Collector #2, Collector #5, and Collector #6) shall be in operation and control emissions from the Mold Line #2 shakeout operation, one (1) casting cooling feeder conveyor, one (1) casting cooling transfer conveyor, one (1) sand cooler and associated feed belt,

the sand handling systems and shotblasters #3 and #4 at all times that these units are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.5 Visible Emissions Notations

(a) Visible emission notations of the Mold Line #2 stack exhausts (ID Nos. S-2, S-5, S-6, S-10, S-11, and S-12) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.3.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the four (4) dust collectors used in conjunction with Mold Line #2, at least once per shift when Mold Line #2 is in operation when venting to the atmosphere. When for any one reading, the pressure drop across any of the four (4) dust collectors identified as Collector #2, Collector #5, Collector #6, and Collector #10 is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C-Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.7 Dust Collector Inspections

An inspection shall be performed each calender quarter of all bags controlling Mold Line #2 when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.3.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.9 Record Keeping Requirements

(a) To document compliance with Condition D.3.5, the Permittee shall maintain records of visible emission notations of the Mold Line #2 stack exhausts once per shift.

(b) To document compliance with Condition D.3.6, the Permittee shall maintain once per shift records of the inlet and outlet differential static pressure during normal operation when venting to the atmosphere for each dust collector.

(c) To document compliance with Condition D.3.7, the Permittee shall maintain records of the results of the inspections required under Condition D.3.7.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

(g) one (1) core sand mixer (ID North Core Sand Mixer), constructed in 1993, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 2) for particulate matter control which exhausts indoors, and two (2) core machines (ID 103 Core Machine and 106 Core Machine), constructed in 1972 and 1974, respectively, each with a maximum throughput of 5.1 tons of sand per hour, a maximum resin and sand mixture resin content of 1.0% for each machine, and a maximum DMEA usage rate of 4.8 pounds per ton of sand for each machine, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(h) one (1) core sand mixer (ID South Core Sand Mixer), constructed in 1993, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 3) for particulate matter control which exhausts indoors, and two (2) core machines (ID N-321 Core Machine and S-321 Core Machine), both constructed in 1976, each with a maximum throughput of 4.08 tons of sand per hour, a maximum resin and sand mixture resin content of 1.0% for each machine, and a maximum DMEA usage rate of 4.8 pounds per ton of sand for each machine, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(i) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines (ID Disa Core Machine (constructed in 1993), CB-1 Core Machine (constructed in 1992), CB-2 Core Machine (constructed in 1992), CB-3 Core Machine (constructed in 1995), CB-4 Core Machine (constructed in 1995), and CB-5 Core Machine (constructed in 2000)), with the Disa Core Machine having a maximum throughput of 1.77 tons of sand per hour, a maximum resin and sand mixture resin content of 1.1%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand, and each of the remaining five (5) core machines with a maximum throughput of 1.5 tons of sand per hour, with each of core machines CB-1 through CB-4 having a maximum resin and sand mixture resin content of 1.1%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand, and core machine CB-5 having a maximum resin and sand mixture resin content of 1.5%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand, all with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 VOC Emission Limits [326 IAC 8-1-6] [326 IAC 2-2][40 CFR 52.21]

In order to render the requirements of 326 IAC 8-1-6 (BACT) not applicable, the following conditions shall apply:

(a) The total resin usage for core machines CB-1 and CB-2 shall not exceed 185,695 pounds of resin per 12 consecutive month period. DMEA usage for core machines CB-1 and CB-2 shall not exceed 40,515 pounds of DMEA per 12 consecutive month period.

(b) The total resin usage for core machines CB-3 and CB-4 shall not exceed 185,695 pounds of resin per 12 consecutive month period. DMEA usage for core machines CB-3 and CB-4 shall not exceed 40,515 pounds of DMEA per 12 consecutive month period.

(c) The resin usage for core machine CB-5 shall not exceed 237,143 pounds of resin per 12 consecutive month period. DMEA usage for core machine CB-5 shall not exceed 37,943

pounds of DMEA per 12 consecutive month period.

(d) The resin usage for the DISA core machine shall not exceed 185,695 pounds of resin per 12 consecutive month period. DMEA usage for the DISA core machine shall not exceed 40,515 pounds of DMEA per 12 consecutive month period.

(e) The VOC emissions (not including DMEA) from core machines CB-1, CB-2, CB-3, CB-4, CB-5, and DISA shall not exceed 0.05 pounds per pound of resin.

Therefore, the requirements of 326 IAC 8-1-6 (BACT) shall not apply. Compliance with these limits is also necessary to render the requirements of 40 CFR 52.21 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.4.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) PM and PM10 emissions from the North Core Sand Mixer shall not exceed 1.40 and 0.54 pounds per hour, respectively;

(b) PM and PM10 emissions from the South Core Sand Mixer shall not exceed 1.40 and 0.54 pounds per hour, respectively.

These limits, in addition to the PM and PM10 limits in condition D.2.1(a)(1) and (2), will insure that PM and PM10 emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line in 1993, per CP 065-2749-00007) do not exceed the PSD major modification thresholds of 25 and 15 tons per year, respectively.

(c) Emissions of PM and PM-10 from the one (1) sand mixer (ID New Core Sand Mixer), installed in 1995, shall not exceed 5.68 and 3.40 pounds per hour, respectively. These limits will insure that PM and PM10 emissions do not exceed the PSD major modification thresholds of 25 tons per year for PM and 15 tons per year for PM10.

Therefore the requirements of 326 IAC 2-2 (PSD) and 40 CFR 52.21 shall not apply.

D.4.3 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable particulate matter (PM) emission rate from each of the three (3) core sand mixers (ID North Core Sand Mixer, South Core Sand Mixer, and New Core Sand Mixer) shall not exceed 17.87 pounds per hour when each is operating at a process weight rate of 18,000 pounds per hour.

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirements

D.4.4 VOC Emissions

Compliance with Conditions D.4.1 shall be demonstrated within 30 days of the end of each month based on the total resin and DMEA catalyst usage for the twelve (12) month period.

D.4.5 Particulate Matter (PM)

The three (3) dust collectors (ID Bin Vents 2, 3, and 4) shall be in operation and control emissions from the three (3) sand mixers at all times that the three (3) sand mixers are in operation.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.6 Record Keeping Requirements

(a) To document compliance with Conditions D.4.1 (a), (b), (c) and (d), the Permittee shall maintain records of the DMEA and resin usages for each of core machines CB-1, CB-2, CB-3, CB-4, CB-5, and Disa each month.

(b) To document compliance with Condition D.4.1 (e), the Permittee shall maintain records of the VOC content of the binders used for core machines CB-1, CB-2, CB-3, CB-4, CB-5, and Disa each month.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.4.7 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.4.1 (a), (b), (c), and (d) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. The reports submitted by the Permittee do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.5 FACILITY CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

Insignificant Activity

(a) Operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including pneumatic conveying as follows:
(1) One (1) pneumatically conveyed core sand reclaim system with one (1) dust collector for particulate matter control, exhausting to the general ventilation.[326 IAC 6-3-2].

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.5.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the core sand reclaim system, an insignificant activity, shall not exceed 8.56 pounds per hour, when operating at a process weight rate of 6,000 pounds of sand per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirements

D.5.2 Particulate Matter (PM)

The dust collector for particulate matter control shall be in operation at all times that the core sand reclaim system is in operation.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT CERTIFICATION

Source Name: Grede Foundries, Inc. - New Castle
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Mailing Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T065-6354-00007

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

COMPLIANCE BRANCH
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Grede Foundries, Inc. - New Castle
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Mailing Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T065-6354-00007

This form consists of 2 pages **Page 1 of 2**

9 This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Grede Foundries, Inc. - New Castle
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Mailing Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T065-6354-00007
Facility: Mold Line #1
Parameter: Metal throughput
Limit: Pursuant to CP 065-2749-00007, issued March 24, 1993, the maximum metal throughput to Mold Line #1 shall be limited to 76,572 tons per twelve (12) consecutive month period, rolled on a monthly basis.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Metal Throughput This Month (tons)	Metal Throughput for Previous 11 Months (tons)	12 Month Total Metal Throughput (tons)

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: Grede Foundries, Inc. - New Castle
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Mailing Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T065-6354-00007
Facility: Core Machines CB-1, CB-2, CB-3, CB-4, CB-5, and Disa
Parameter: Resin and DMEA catalyst usage to limit VOC emissions to less than 25 tons/year.
Limits:

(a) The total resin usage for core machines CB-1 and CB-2 shall not exceed 185,695 pounds of resin per 12 consecutive month period. DMEA usage for core machines CB-1 and CB-2 shall not exceed 40,515 pounds of DMEA per 12 consecutive month period.

(b) The total resin usage for core machines CB-3 and CB-4 shall not exceed 185,695 pounds of resin per 12 consecutive month period. DMEA usage for core machines CB-3 and CB-4 shall not exceed 40,515 pounds of DMEA per 12 consecutive month period.

(c) The resin usage for core machine CB-5 shall not exceed 237,143 pounds of resin per 12 consecutive month period. DMEA usage for core machine CB-5 shall not exceed 37,943 pounds of DMEA per 12 consecutive month period.

(d) The resin usage for the DISA core machine shall not exceed 185,695 pounds of resin per 12 consecutive month period. DMEA usage for the DISA core machine shall not exceed 40,515 pounds of DMEA per 12 consecutive month period.

YEAR: _____

Month	Core Machine ID	Column 1		Column 2		Column 1 + Column 2	
		Resin Usage This Month (lbs)	DMEA Catalyst Usage This Month (lbs)	Resin Usage for Previous 11 Months (lbs)	DMEA Catalyst Usage for Previous 11 Months (lbs)	12 Month Total Resin Usage (lbs)	12 Month Total DMEA Catalyst Usage (lbs)
	CB-1 & CB-2						
	CB-3 & CB-4						
	CB-5						
	DISA						
	CB-1 & CB-2						
	CB-3 & CB-4						
	CB-5						
	DISA						
	CB-1 & CB-2						
	CB-3 & CB-4						

	CB-5						
	DISA						

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Grede Foundries, Inc. - New Castle
Source Address: 2700 East Plum Street, New Castle, Indiana 47362
Mailing Address: 2700 East Plum Street, New Castle, Indiana 47362
Part 70 Permit No.: T065-6354-00007

Months: _____ **to** _____ **Year:** _____

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Part 70 Operating Permit

Source Name:	Grede Foundries, Inc. - New Castle
Source Location:	2700 East Plum Street, New Castle, Indiana 47362
County:	Henry
SIC Code:	3321
Operation Permit No.:	T065-6354-00007
Permit Reviewer:	Trish Earls/EVP

On April 12, 2002, the Office of Air Quality (OAQ) had a notice published in the Courier Times, New Castle, Indiana, stating that Grede Foundries, Inc. - New Castle had applied for a Part 70 Operating Permit to operate a stationary gray iron and ductile iron foundry. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. This was the second time that the proposed permit was public noticed due to the large number of revisions that were necessary since the first draft was proposed. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On May 16, 2002, Mr. Tim Palmer of Grede Foundries, Inc. - New Castle, submitted comments on the proposed Part 70 permit. A summary of the comments and corresponding responses is as follows:

Comment #1

Regarding Condition D.1.5 and D.1.9(a), Visible Emissions Notations, we believe that once per shift visible emission (VE) notations are excessive and unnecessary. We therefore request that the permit require daily instead of once per shift VE notations. On a day to day basis, our production and associated emissions are relatively consistent and do not suffer from radical changes. After many years of observing the workings and emissions from this foundry operation, we do not believe that once per shift VE notations would provide any information beyond that which daily VE notations would provide. In addition, our aggressive maintenance standards in the last few years have resulted in very reliable particulate control equipment operation.

Response #1

Compliance monitoring conditions are in the permit in order to ensure continuous compliance with the requirements. Baghouse failure can occur suddenly; therefore visible emissions notations and monitoring of baghouse operational parameters should be performed more frequently than daily in such cases where a source operates more than one shift per day. The required frequency of compliance monitoring is once per shift in order to demonstrate continuous compliance unless specified otherwise by an applicable rule. The OAQ believes that visible emissions notations once per operating shift are a reasonable requirement.

Further, while the nature of a facility's operation may not vary from shift to shift, the personnel at the facility does change from shift to shift. The OAQ believes that all shifts should be in tune with the work practices necessary to ensure continual compliance with permit requirements. The OAQ believes that these work practices should include an understanding and awareness of plant emissions during normal operations. This knowledge and awareness during all shifts can minimize lag time in addressing control failure. Therefore, conditions D.1.5 and D.1.9(a) will not be revised as a result of this comment.

Comment #2

Regarding Condition D.1.6, Parametric Monitoring, we request that pressure drop records be kept on a daily basis. Pressure drop records on a per shift basis will provide no additional benefit over daily pressure drop records. This is because the types of filter systems that are used at this facility do not suffer from radical shifts in pressure drop over short time periods. This observation is based on many years of observing the workings of this foundry operation and managing the day to day maintenance of the equipment.

Also, the range of the pressure drop across the #7 collector should be 1.0 to 8.0 inches of water.

Response #2

As stated in Response #1 above, compliance monitoring conditions are in the permit in order to ensure continuous compliance with the requirements. Monitoring of baghouse operational parameters should be more frequently than daily in such cases where a source operates more than one shift per day because baghouse failure can occur suddenly. The OAQ believes that pressure drop readings once per operating shift are a reasonable requirement.

Further, as stated in Response #1, while the nature of a facility's operation may not vary from shift to shift, the personnel at the facility does change from shift to shift. The OAQ believes that all shifts should be in tune with the work practices necessary to ensure continual compliance with permit requirements. The OAQ believes that these work practices should include an understanding and awareness of plant emissions during normal operations. This knowledge and awareness during all shifts can minimize lag time in addressing control failure.

The pressure drop range for the dust collector #7 has been revised as requested. Condition D.1.6 now reads as follows:

D.1.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collector (ID Collector #7) used in conjunction with the four (4) electric induction furnaces, the scrap preheater, and the inoculation process, at least once per shift when the four (4) electric induction furnaces, the scrap preheater, and the inoculation process are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the dust collector is outside the normal range of ~~0.5~~**1.0** and ~~7.5~~**8.0** inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Comment #3

Regarding Condition D.2.3(a), Opacity, we do not believe that there is regulatory justification for a 20% opacity limit on fugitive emissions or a 10% limit on point source opacity. One of the original purposes of the Title V permitting program was to correct mistakes and poor regulatory determinations that were made in past permits. The applicable opacity limitation for Henry County is 40% for point sources, and fugitive dust in Henry County is considered in compliance provided that no dust crosses the property line. We believe that these are the correct limitations for this foundry based on application of the rules in 326 IAC 5 and 326 IAC 6. We therefore request that Condition D.2.3(a) be revised to indicate a 40% opacity limit on point sources and that fugitive dust will be considered in compliance provided that no dust crosses the property line.

Response #3

The opacity limits in condition D.2.3(a) were taken from Construction Permit No. CP-065-2749-00007, issued March 24, 1993. As stated in condition 7 of that permit, the condition requiring the opacity limits on the Mold Line #1 sand handling and casting finishing operations, in association with several other conditions in that permit, was necessary to insure that the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) did not apply. The opacity limits pursuant to 326 IAC 5-1, that are included in condition C.2 of the Part 70 permit, are for other units at the source which do not have more stringent opacity limits. In order to have this requirement removed from the Part 70 permit, the source must submit a separate permit modification application requesting that this requirement be removed with a justification of why it should be removed. A compliance history for the Mold Line #1 sand handling and casting finishing operations with 326 IAC 5-1 should also be included. Condition D.2.3 will remain unchanged as a result of this comment.

Comment #4

Regarding Condition C.13, Ambient Monitoring, we wish to petition the Commissioner that the requirement for ambient PM-10 monitoring be discontinued and removed from the Title V permit. The original requirement in CP-065-2749-00007, issued on March 24, 1993, was for ambient PM-10 monitoring to be performed for a minimum period of two complete years. After this period, Grede may petition for removal of the requirement if it is established to the satisfaction of the Commissioner that ambient PM-10 levels will continue to comply with the National Ambient Air Quality Standards, without adverse effect to the community. We have performed the required ambient monitoring for approximately six complete years and have not received an opacity violation for the monitored systems during this period. In addition, we believe that ambient PM-10 levels have been in compliance with the National Ambient Air Quality Standards while ambient monitoring has been in place, and that the community has not been adversely affected during this period by the emissions from our facility. If the requirement for ambient PM-10 monitoring is to remain in the Title V permit, we wish to request that IDEM provide justification that ambient PM-10 levels have not been in compliance with the National Ambient Air Quality Standards while ambient monitoring has been in place, and that the community has been adversely affected during this period by the emissions from our facility.

Response #4

The requirement for ambient PM-10 monitoring in condition C.13 is taken directly from a previously issued permit (CP-065-2749-00007, issued on March 24, 1993). Since an Agreed Order Cause No. A-887, was issued on October 27, 1987 to Dana Corporation (the previous owner), for violations of 326 IAC 6-4-2(a)(3) and (4), the decision to remove this requirement must be discussed and coordinated with the Office of Enforcement and the OAQ Modeling section. Therefore, to avoid delaying the issuance of the Part 70 permit, this petition to have this requirement removed will be evaluated by the OAQ separately and will be processed as a Significant Permit Modification. There have been no changes to the Part 70 permit as a result of this comment.

Comment #5

Regarding Condition D.2.9 and D.2.13(b), Visible Emissions Notations, we believe that once per shift visible emission (VE) notations are excessive and unnecessary. We therefore request that the permit require daily instead of once per shift VE notations. On a day to day basis, our production and associated emissions are relatively consistent and do not suffer from radical changes. After many years of observing the workings and emissions from this foundry operation, we do not believe that once per shift VE notations would provide any information beyond that which daily VE notations would provide. In addition, our aggressive maintenance standards in the last few years have resulted in very reliable particulate control equipment operation.

Response #5

For the reasons stated in response #1 above, the OAQ believes that visible emissions notations once per operating shift are a reasonable requirement. Therefore, conditions D.2.9 and D.2.13(b) will not be revised as a result of this comment.

Comment #6

Regarding Condition D.2.10 and D.2.13(c), Parametric Monitoring, we request that pressure drop records be kept on a daily basis. Pressure drop records on a per shift basis will provide no additional benefit over daily pressure drop records. This is because the types of filter systems that are used at this facility do not suffer from radical shifts in pressure drop over short time periods. This observation is based on many years of observing the workings of this foundry operation and managing the day to day maintenance of the equipment.

Response #6

For the reasons stated in responses #1 and #2 above, the OAQ believes that pressure drop readings once per operating shift are a reasonable requirement. Therefore, no changes have been made to conditions D.2.10 and D.2.13(c) as a result of this comment.

Comment #7

Regarding Condition D.3.5 and D.3.9(a), Visible Emissions Notations, we believe that once per shift VE notations are excessive and unnecessary. We therefore request that the permit require daily instead of once per shift VE notations. On a day to day basis, our production and associated emissions are relatively consistent and do not suffer from radical changes. After many years of observing the workings and emissions from this foundry operation, we do not believe that once per shift VE notations would provide any information beyond that which daily VE notations would provide. In addition, our aggressive maintenance standards in the last few years have resulted in very reliable particulate control equipment operation.

Response #7

For the reasons stated in response #1 above, the OAQ believes that visible emissions notations once per operating shift are a reasonable requirement. Therefore, conditions D.3.5 and D.3.9(a) will not be revised as a result of this comment.

Comment #8

Regarding Condition D.3.6 and D.3.9(b), Parametric Monitoring, we request that pressure drop records be kept on a daily basis. Pressure drop records on a per shift basis will provide no additional benefit over daily pressure drop records. This is because the types of filter systems that are used at this facility do not suffer from radical shifts in pressure drop over short time periods. This observation is based on many years of observing the workings of this foundry operation and managing the day to day maintenance of the equipment. Also, the range of the pressure drop across collectors #2, #5, #6 and #10 should be 1.0 to 8.0 inches of water.

Response #8

For the reasons stated in responses #1 and #2 above, the OAQ believes that pressure drop readings once per operating shift are a reasonable requirement. The pressure drop range for dust collectors #2, #5, #6, and #10 have been revised as requested. Since the pressure drop range for Collector #10 is also included in condition D.2.10, the pressure drop range will be revised in that condition also. Conditions D.2.10 and D.3.6 now read as follows:

D.2.10 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the three (3) dust collectors used in conjunction with Mold Line #1, at least once per shift when Mold Line #1 is in operation when venting to the atmosphere. When for any one reading, the pressure drop across either of the two (2) dust collectors identified as Collector #1 and Collector #3 is outside the normal range of 0.5 and 5.5 inches of water or a range established during the latest stack test, or the pressure drop across the dust collector identified as Collector #10 is outside the normal range of ~~0.5~~**1.0** and ~~6.5~~**8.0** inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.6 Parametric Monitoring

The Permittee shall record the total static pressure drop across each of the four (4) dust collectors used in conjunction with Mold Line #2, at least once per shift when Mold Line #2 is in operation when venting to the atmosphere. When for any one reading, the pressure drop across any of the ~~three (3)~~ **four (4)** dust collectors identified as Collector #2, Collector #5, ~~and~~ Collector #6**, and Collector #10** is outside the normal range of ~~0.5~~**1.0** and ~~7.5~~**8.0** inches of water or a range established during the latest stack test, ~~or the pressure drop across the dust collector identified as Collector #10 is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test,~~ the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Comment #9

Regarding Condition C.15(a), Pressure Gauge and Other Instrument Specifications, we request clarification and possibly a change to the scale and accuracy of gauges. Many of the differential pressure gauges that we employ have a scale of 0 to 10 inches of water and 0 to 15 inches of water. The expected normal reading of these gauges of no less than twenty percent (20%) would then be 2.0 and 3.0 inches of water, respectively. This could be below the start-up reading of dust collector after being refurbished (re-bagged) and therefore could be construed as a deviation or violation. We would request that the 20% limit be eliminated. Also, the accuracy in this condition states that the gauges be accurate within plus or minus two percent (2%) and the gauges that we employ read in 0.5 inches of water increments, which is greater than the two percent stated and could also be construed as a deviation or violation. As stated in C.15(c), it is our belief that the gauges that we currently use will demonstrate compliance and we would therefore request IDEM, OAQ to approve the use of these gauges as an alternative to the specifications mentioned in C.15(a).

Response #9

To request use of alternate gauges, a letter must be sent to the inspector for this source, Richard Sekula, explaining why the alternate gauges should be approved. This will be reviewed by the Air Compliance section of the OAQ. If the request is approved, the source can use the alternate gauges. Since the permit already allows for the use of alternate gauges if approved by the OAQ in condition C.15(c), the permit will not be revised as a result of this comment.

Comment #10

Regarding Condition D.4.7(b), Recordkeeping, we are requesting that this Condition be removed since in

Condition D.4.1(e), VOC Emission Limits, it is stated that "The VOC emissions (not including DMEA)…shall not exceed 0.05 pounds per pound of resin." This was based upon the resin percentage in the core sand mix and was a very conservative emission factor requested by IDEM, OAQ. The request "…to maintain records of the VOC content of the binders…" in Condition D.4.7(b) is not relevant since the emission factor is not based upon an actual VOC content, but on the percent of resin in the core sand mix as stated above and as can be seen in the Technical Support Document.

Response #10

For the VOC emission calculations from core making, it was assumed that the worst case binder is used to determine the potential emissions. Therefore, records must be kept to show that the actual VOC content does not exceed the worst case assumed value. The records could consist of the MSDS for the binder or other documentation from the manufacturer which indicates the VOC content of the binder. Therefore, no changes have been made to condition D.4.7, now D.4.6 (see below), as a result of this comment.

Comment #11

Regarding the spreadsheet on page 12 of 15 in the Technical Support Document Appendix A, we request that the Max DMEA usage be hidden in the spreadsheet, since we are not being limited on the max DMEA consumption per ton of cores. We are only limited on the annual usage of DMEA and do not want the "Max DMEA Usage" numbers in the spreadsheet to be construed as a limit.

Response #11

The maximum DMEA usage in pounds per ton of cores on the spreadsheet on page 12 of 15 of Appendix A is based on the worst case DMEA usage at the source. It is used to calculate potential VOC emissions from core making and is also used to calculate limited DMEA usage. Since the source is not making a claim of confidentiality for this information and putting it in the emission calculations does not make it an enforceable limit, this information will not be hidden in the spreadsheet. It is the same as listing the maximum capacity of a unit in Section A of the permit. The descriptions are not enforceable, but if the capacity increases above the level stated in the permit, the source would need to inform the OAQ and possibly get a permit revision. If the source increases its DMEA usage above the level indicated in the calculations, they would need to inform the OAQ.

Comment #12

Regarding Condition D.1.4, Particulate Matter, we are requesting clarification as to why #7 dust collector must be in operation at all times when the four (4) electric induction furnaces are operating, when the dust collector on the furnaces is really not required to meet PM limits. The PM limit for #1 and #2 furnaces as stated in the draft Title V Permit are 12.85 pounds per hour each and #3 and #4 furnaces are 12.05 pounds per hour each based upon the process weight rate calculation. Using the AP-42 emission factor for electric induction furnaces and as calculated in the TSD, the PM emissions would be below these levels before controls.

Response #12

Based on the AP-42 emission factors for the electric induction furnaces, the preheater, and the inoculation process, only the inoculation process requires control to comply with the PM limits pursuant to 326 IAC 6-

3-2. However, if the source was allowed to operate the four (4) electric induction furnaces uncontrolled, then the furnaces would have to be tested when uncontrolled to verify that they are in compliance with the applicable PM limits when uncontrolled. It is OAQ policy to require testing on uncontrolled emission units where the uncontrolled emission factor has a "D" or "E" rating in AP-42. Therefore, since the uncontrolled PM emission factor for the electric induction furnaces has an "E" rating in AP-42, testing on these units when uncontrolled would be required to verify compliance with the PM limits pursuant to 326 IAC 6-3-2. The source would also be required to perform visible emission notations on the uncontrolled furnaces. Therefore, since these furnaces are typically operated with control, the requirement to operate Collector #7 at all times that the furnaces are in operation was included in the Part 70 permit so that testing of the furnaces uncontrolled would not be necessary.

Comment #13

Regarding Condition D.4.4, Preventive Maintenance Plan, we are requesting clarification as to what control devices are required to have a PMP. Further comments may be made once this comment has been answered.

Response #13

Condition D.4.4 of the Part 70 Permit requires a Preventive Maintenance Plan be maintained for the scrubber controlling DMEA emissions from the core machines. However, since the scrubber is not necessary to comply with the VOC usage limits in condition D.4.1, to render 326 IAC 8-1-6 (BACT) not applicable, the requirement for a Preventive Maintenance Plan should not apply. Therefore, condition D.4.4 has been removed from the Part 70 permit. The subsequent conditions in section D.4 have been re-numbered accordingly.

~~D.4.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices for the above listed facilities.~~

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

1. The equipment descriptions for the core sand mixers and core machines in section A.2 and D.4 have been revised to include the maximum resin content and DMEA usages for each core machine. These descriptions are not enforceable, but if the source increases the resin content of the resin and sand mixture or DMEA usage above the level indicated in the descriptions, they would need to inform the OAQ and possibly get a permit revision. The equipment descriptions in section A.2 and D.4 now read as follows:

   (g) one (1) core sand mixer (ID North Core Sand Mixer), constructed in 1993, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 2) for particulate matter control which exhausts indoors, and two (2) core machines (ID 103 Core Machine and 106 Core Machine), constructed in 1972 and 1974, respectively, each with a maximum throughput of 5.1 tons of sand per hour, **a maximum resin and sand mixture resin content of 1.0% for each machine, and a maximum DMEA usage rate of 4.8 pounds per ton of sand for each machine,** both with a wet acid scrubber system for

DMEA (a VOC) control, exhausting to the general ventilation.

(h) one (1) core sand mixer (ID South Core Sand Mixer), constructed in 1993, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 3) for particulate matter control which exhausts indoors, and two (2) core machines (ID N-321 Core Machine and S-321 Core Machine), both constructed in 1976, each with a maximum throughput of 4.08 tons of sand per hour, **a maximum resin and sand mixture resin content of 1.0% for each machine, and a maximum DMEA usage rate of 4.8 pounds per ton of sand for each machine,** both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(i) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines (ID Disa Core Machine (constructed in 1993), CB-1 Core Machine (constructed in 1992), CB-2 Core Machine (constructed in 1992), CB-3 Core Machine (constructed in 1995), CB-4 Core Machine (constructed in 1995), and CB-5 Core Machine (constructed in 2000)), with the Disa Core Machine having a maximum throughput of 1.77 tons of sand per hour**, a maximum resin and sand mixture resin content of 1.1%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand,** and each of the remaining five (5) core machines with a maximum throughput of 1.5 tons of sand per hour, **with each of core machines CB-1 through CB-4 having a maximum resin and sand mixture resin content of 1.1%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand, and core machine CB-5 having a maximum resin and sand mixture resin content of 1.5%, and a maximum DMEA usage rate of 4.8 pounds per ton of sand,** all with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

2. Condition D.1.1 has been revised such that the requirement to operate Collector #7 and the collection hood at all times that the inoculation process is in operation has been removed since this requirement is already included in Condition D.1.4.

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from each of the electric induction furnaces #1 and #2 shall not exceed 12.85 pounds per hour, when each furnace is operating at a process weight rate of 11,000 pounds per hour.

(b) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from each of the electric induction furnaces #3 and #4 shall be limited to 12.05 pounds per hour, when each furnace is operating at a process weight rate of 10,000 pounds per hour.

(c) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the charge handling operation shall be limited to 31.53 pounds per hour, when operating at a process weight rate of 42,000 pounds per hour.

(d) Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the inoculation process shall be limited to 31.53 pounds per hour, when operating at a process weight rate of 42,000 pounds per hour.

(e) For purposes of demonstrating compliance with the PM emission limits for electric induction furnaces #1, #2, #3, and #4 and the inoculation process exhausting through Collector #7, the allowable PM emission rate from Collector #7 shall be limited to 81.33 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

~~The dust collector (ID Collector #7) and the collection hood shall be in operation at all times that the inoculation process is in operation in order to comply with this limit.~~

3. Condition D.2.1, paragraph (b), has been revised to include the #1 Mold Line Cooling operation in the VOC emission limit because the emission factor includes pouring and cooling.

D.2.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(b) VOC emissions from the Mold Line #1 Pouring **and Cooling** operation**s** shall not exceed 0.14 pounds of VOC per ton of metal charged;

4. Condition D.2.4 has been revised to more clearly state that the VOC emission limits and metal throughput limit are considered to be BACT pursuant to 326 IAC 8-1-6 (New Facilities, General Reduction Requirements). The revised condition reads as follows:

D.2.4 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Based on a BACT analysis submitted on September 16, 1992, as part of the construction permit application for CP 065-2749-00007, ~~no VOC emission control has been determined to be~~ BACT for the #1 Mold Line Pouring and Shakeout operations~~. The following VOC emission limits~~ shall ~~also apply~~ **be the following**:

(a) VOC emissions from the Mold Line #1 Pouring **and Cooling** operation**s** shall not exceed 0.14 pounds of VOC per ton of metal charged;

(b) VOC emissions from the Mold Line #1 Shakeout operation shall not exceed 1.2 pounds of VOC per ton of metal charged;

(c) The throughput of metal to Mold Line #1 shall not exceed 76,572 tons per twelve (12) consecutive month period.

5. Conditions D.1.2, D.2.5, and D.3.2 have been revised to specifically identify which facility is referred to in the requirement to have a Preventive Maintenance Plan for its control devices.

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control device~~s~~ for the ~~above listed facilities~~ **electric induction furnaces, the preheater, and the inoculation process**.

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices for the ~~above listed facility~~ **Mold Line #1 operations**.

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the control devices for the ~~above listed facility~~ **Mold Line #2 operations**.

6. Conditions D.2.13(a) and D.2.14 have been revised to include reference to the metal throughput limit that is also listed in condition D.2.4(c). The conditions are revised as follows:

D.2.13 Record Keeping Requirements

(a) To document compliance with condition**s** D.2.1 (d) **and D.2.4(c)**, the Permittee shall maintain records of the monthly metal throughput to Mold Line #1.

D.2.14 Reporting Requirements

A quarterly summary of the information to document compliance with Condition**s** D.2.1(d) **and D.2.4(c)** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

7. The emission factor initially used for lead emissions from the electric induction furnaces was found to be incorrect. The emission factor represents the average emission factor from FIRE version 6.23. It should be 0.0545 pound per ton of metal, not 0.5045 pound per ton of metal which was originally used. Therefore, the emission calculations for the electric induction furnaces on page 3 of 15 of Appendix A have been revised so that the correct lead emission factor is used. The Emission Calculations Summary on pages 1 and 2 of 15 of Appendix A have also been revised accordingly. The portion of the Potential to Emit section of the TSD which shows the potential emissions of HAPs from the source now reads as follows:

Potential To Emit

HAP's	Potential To Emit (tons/year)
Chromium	less than 10
Manganese	greater than 10
Cobalt	less than 10

Nickel	less than 10
Arsenic	less than 10
Cadmium	less than 10
Selenium	less than 10
Lead	~~greater~~ **less** than 10
Naphthalene	less than 10
TOTAL	greater than 25

The Potential to Emit After Issuance table in the TSD does not require any changes since it already shows the correct total HAP emissions after control for the electric induction furnaces. Lead emissions are also included in the PM and PM-10 emissions for the electric induction furnaces, however, the table also shows the correct PM and PM-10 emissions after control so no revisions were necessary.

The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit

Source Background and Description

Source Name:	**Grede Foundries, Inc. - New Castle**
Source Location:	**2700 East Plum Street, New Castle, Indiana 47362**
County:	**Henry**
SIC Code:	**3321**
Operation Permit No.:	**T065-6354-00007**
Permit Reviewer:	**Trish Earls/EVP**

The Office of Air Quality (OAQ) has reviewed a Part 70 permit application from Grede Foundries, Inc. - New Castle relating to the operation of a gray iron and ductile iron foundry.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) four (4) electric induction melting furnaces (ID Nos. Furnace #1, Furnace #2, Furnace #3, and Furnace #4), with Furnace #1 and #2, both constructed in 1968, each having a maximum melt rate of 5.5 tons of ductile iron per hour, and Furnace #3 and #4, both constructed in 1976, each having a maximum melt rate of 5.0 tons of ductile iron per hour, all controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(b) one (1) charge handling system, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, exhausting through general ventilation;

(c) one (1) natural gas-fired scrap preheater, constructed in 1968, with a maximum heat input of 9.84 million (MM) British thermal units (Btu) per hour, and a maximum throughput of 21.0 tons of ductile iron per hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(d) one (1) inoculation process, constructed in 1968, with a maximum throughput of 21.0 tons of ductile iron per hour, with particulate matter emissions controlled by a collection hood ducted to one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7);

(e) one (1) molding operation (ID No. Mold Line #1), constructed in 1993, consisting of the following:

(1) one (1) sand muller (ID No. Line #1 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 102.5 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through

one (1) stack (ID No. S-1);

(2) one (1) metal pouring operation (ID No. Line #1 Pouring), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(3) one (1) metal cooling operation (ID No. Line #1 Cooling), with a maximum throughput of 10.25 tons per hour of ductile iron, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(4) one (1) mold shakeout operation (ID No. Line #1 Shakeout) and associated shakeout conveyor, with a maximum ductile iron casting throughput of 10.25 tons per hour, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(5) one (1) mold punch up operation, controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3), exhausting through one (1) stack (ID No. S-1);

(6) one (1) casting transfer operation, constructed in 1993, consisting of the following:

(A) one (1) accumulating shaker, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand, exhausting through one (1) stack (ID No. S-1);

(B) one (1) degate shaker, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand, exhausting through one (1) stack (ID No. S-1);

(C) one (1) loader shaker; and

(D) one (1) belt conveyor, with a maximum throughput of 10.25 tons per hour of ductile iron castings and 102.5 tons per hour of sand.

(7) one (1) casting finishing operation, constructed in 1993, consisting of the following:

(A) two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast), each with a maximum throughput of 5.125 tons per hour of ductile iron castings, both controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10);

(B) four (4) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, all controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10).

Note: all the above operations which exhaust through stack ID No. S-1, are controlled by two (2) dust collectors (ID Nos. Collector #1 and Collector #3).

(f) one (1) molding operation (ID No. Mold Line #2), constructed in 1968, consisting of the following:

(1) one (1) sand muller (ID No. Line #2 Muller) and associated feed and discharge belts, with a maximum mold sand throughput of 107.5 tons per hour, all controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5);

(2) one (1) metal pouring operation (ID No. Line #2 Pouring), with a maximum throughput of 10.75 tons per hour of ductile iron, exhausting through one (1) stack (ID No. S-11);

(3) one (1) metal cooling operation (ID No. Line #2 Cooling), with a maximum throughput of 10.75 tons per hour of ductile iron, with the cooling area following the metal pouring operation exhausting uncontrolled through one (1) stack (ID No. S-12), the cooling area following the punch-up operation controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5), and the cooling area following the shake out operation exhausting through general ventilation;

(4) one (1) mold punch up operation, with a maximum throughput of 10.75 tons per hour of ductile iron and 107.5 tons per hour of sand, controlled by one (1) dust collector (ID No. Collector #5), exhausting through one (1) stack (ID No. S-5);

(5) one (1) mold shakeout operation (ID No. Line #2 Shakeout) and associated vibrator conveyor, with a maximum throughput of 10.75 tons per hour of ductile iron and 107.5 tons per hour of sand, controlled by one (1) dust collector (ID No. Collector #2), exhausting through one (1) stack (ID No. S-2);

(6) one (1) casting finishing operation, constructed in 1968, consisting of the following:

(A) two (2) shot blast machines (ID Nos. #3 Shot Blast and #4 Shot Blast), each with a maximum throughput of 5.375 tons per hour of ductile iron castings, controlled by one (1) pulse jet dust collector (ID No. Collector #6) which exhausts through one (1) stack (ID No. S-6); and

(B) seven (7) grinders, each with a maximum throughput of 0.89 tons per hour of ductile iron castings, with four (4) of the grinders controlled by one (1) pulse jet dust collector (ID No. Collector #10) which exhausts through one (1) stack (ID No. S-10), and three (3) of the grinders controlled by one (1) pulse jet dust collector (ID No. Collector #6) which exhausts through one (1) stack (ID No. S-6);

(g) one (1) core sand mixer (ID North Core Sand Mixer), constructed in 1993, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 2) for particulate matter control which exhausts indoors, and two (2) core machines (ID 103 Core Machine and 106 Core Machine), constructed in 1972 and 1974, respectively, each with a maximum throughput of 5.1 tons of sand per hour, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(h) one (1) core sand mixer (ID South Core Sand Mixer), constructed in 1993, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 3) for particulate matter control which exhausts indoors, and two (2) core machines (ID N-321 Core Machine and S-321 Core Machine), both constructed in 1976, each with a maximum throughput of 4.08 tons of sand per hour, both with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

(i) one (1) core sand mixer (ID New Core Sand Mixer), constructed in 1995, with a maximum throughput of 9.0 tons of sand per hour, with one (1) dust collector (ID Bin Vent 4) for particulate matter control which exhausts indoors, and six (6) core machines (ID Disa Core Machine (constructed in 1993), CB-1 Core Machine (constructed in 1992), CB-2 Core Machine (constructed in 1992), CB-3 Core Machine (constructed in 1995), CB-4 Core Machine (constructed in 1995), and CB-5 Core Machine (constructed in 2000)), with the Disa Core Machine having a maximum throughput of 1.77 tons of sand per hour and each of the remaining five (5) core machines with a maximum throughput of 1.5 tons of sand per hour, all with a wet acid scrubber system for DMEA (a VOC) control, exhausting to the general ventilation.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million (MM) British thermal units (Btu) per hour including:

(1) one (1) scrap preheater, with a maximum heat input capacity of 9.84 MMBtu per

hour, controlled by one (1) dust collector (ID No. Collector #7), exhausting through one (1) stack (ID No. S-7).

(b) Propane or liquified petroleum gas, or butane-fired combustion sources with heat input equal to or less than six (6) million Btu per hour.

(c) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(d) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(e) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(f) Paved and unpaved roads and parking lots with public access.

(g) Gasoline emergency generators not exceeding 110 horsepower.

(h) Diesel emergency generators not exceeding 1600 horsepower.

(i) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees C.

(j) Operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per dry standard cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including pneumatic conveying as follows:

(1) One (1) pneumatically conveyed core sand reclaim system with one (1) dust collector for particulate matter control, exhausting to the general ventilation.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(1) OP 33-07-87-0107, issued on March 8, 1984;

(2) CP065-2749-00007, issued on March 24, 1993;

(3) CP065-3495-00007, issued on June 22, 1994; and

(4) Minor Source Modification No. 065-12236-00007, issued on July 24, 2000.

All conditions from previous approvals were incorporated into this Part 70 permit except the following:

(1) CP065-2749-00007, issued on March 24, 1993.
Operation Condition No. 5

5. That particulate matter (expressed as PM10) emissions from Osborn Line No. 1 including: sand handling, reclamation, pouring/casting, casting cooling and shakeout, and from casting/finishing operations shall be limited to 28 pounds per hour, overall. This condition shall satisfy 326 IAC 6-3 (Particulate Matter (PM) Limitations for Process Operations). PM10 is conservatively estimated at 21.6 pounds per hour, indicating compliance with this provision.

Reason not incorporated:

This condition specifies a PM10 emission limit for emissions from the Osborn Line No. 1 (now identified as Mold Line #1) based on the limit established by 326 IAC 6-3. This rule establishes emission limitations for particulate matter (PM), which is any particulate matter with an aerodynamic diameter less than or equal to 100 microns, and not just for

particulate matter with an aerodynamic diameter of less than or equal to 10 microns (PM10). Therefore, for this source, where PM10 emissions are not assumed to be equivalent to PM emissions, it is incorrect to limit PM10 emissions based on a PM emission limitation. PM10 emissions from the #1 Mold Line will be limited to insure that PM10 emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line) do not exceed the major modification thresholds for 326 IAC 2-2 (PSD). See page 11 below for a more detailed discussion of this limit.
Operation Condition No. 8

8. That pursuant to Agreed Order, Cause A-887, and 326 IAC 6-5, fugitive dust emissions shall comply with the plan dated December 1, 1987 by Dana Corporation. Also, fugitive dust will be considered in compliance with 326 IAC 6-4 and 6-5 provided that no visible dust crosses the property line. This plan requires:

   (a) All access roads to facilities, storage, and equipment shall be paved.
   (b) Raw materials, products and waste storage shall be under roof or enclosed not conducive for fugitive dust generation.
   (c) The plant operation includes the sweeping of all paved roads. Sweeping of paved roadways shall be performed at least once per month, weather permitting.

   The plan shall be updated subject to approval by OAM prior to validation of the Operation Permit.

Reason not incorporated:

Since the issuance of CP065-2749-00007, Grede Foundries, Inc. - New Castle has paved all access roads at the source. All scrap storage piles are equipped with roll-up doors so that they are not conducive for fugitive dust generation. The new fugitive dust control plan submitted by Grede Foundries, Inc. on August 1, 1996, includes a requirement to sweep all paved roads at least once per month, weather permitting. Therefore, since the new fugitive dust control plan satisfies the requirements of the Agreed Order and 326 IAC 6-5, Operation Condition 8, as listed above, is no longer necessary. Instead, the requirements of the fugitive dust control plan are now included in condition C.6 (Fugitive Particulate Matter Emission Limitations) of the Title V permit.

(2) CP065-3495-00007, issued on June 22, 1994.

Operation Condition No. 4

4. That volatile organic compound usage for the sand mixer (M300) and the core machine (CB-22) shall be limited to 2 tons per month (24 tons per year). Therefore, 326 IAC 8-1-6 and the Prevention of Significant Deterioration Rules, 326 IAC 2-2 and 40 CFR 52.21 shall not apply.

Reason not incorporated:

There are a total of ten (10) core machines in the core making operation. Potential VOC emissions from each core machine is greater than 25 tons per year. Six (6) of the machines, including CB-22 (later revised to two (2) core machines now identified as CB-3 and CB-4), were installed after 1980. The core machines identified as CB-1 and CB-2 were both installed in 1992, therefore, a total VOC usage limit of less than 25 tons per year will be applied for these two machines to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable. The core machines identified as CB-3 and CB-4 were both installed in 1995, therefore, a total VOC usage limit of less

than 25 tons per year will be applied for these two machines to render the requirements of 326 IAC 8-1-6 not applicable. For the two (2) core machines identified as Disa and CB-5, installed in 1993 and 2000, respectively, a VOC usage limit of less than 25 tons per year will be applied for each of these machines to render the requirements of 326 IAC 8-1-6 not applicable. The VOC limits for the machines will now be expressed as 24.9 tons per twelve (12) consecutive month period, rolled on a monthly basis. To avoid the requirements of 326 IAC 2-2 (PSD), VOC usage limits will also be applied to the core machines as needed based on their installation dates. Three (3) of the core machines (ID 103, N-321, and S-321 Core Machines) were installed prior to the 326 IAC 2-2 rule applicability date of August 7, 1977, therefore, these machines will not require VOC usage limits. See page 11 below for a detailed discussion of the VOC usage limits for the other core machines to avoid the requirements of 326 IAC 2-2.

(3) Minor Source Modification No. 065-12236-00007, issued on July 24, 2000.

Operation Condition D.1.1

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

The sand throughput to the existing sand mixer (ID New Sand Mixer) and the six (6) associated core machines (ID Disa, CB-1, CB-2, CB-3, CB-4, and CB-5) shall not exceed 64,335 tons per twelve (12) consecutive month period, rolled on a monthly basis. The usage of DMEA catalyst in each of the six (6) core machines shall not exceed 154.3 tons per twelve (12) consecutive month period, rolled on a monthly basis. The wet acid scrubber shall be in operation at all times that the core machines are in operation and shall maintain a minimum overall control efficiency of 98%. This sand throughput limitation, the catalyst usage limitation, and the VOC control will limit VOC emissions from the sand mixer and six (6) core machines to less than 25 tons per twelve (12) consecutive month period so that the requirements of 326 IAC 8-1-6 do not apply.

Reason not incorporated:

The above VOC emission limit to render the requirements of 326 IAC 8-1-6 (New Facilities, General Reduction Requirements) not applicable was erroneously based on emissions after the use of the wet acid scrubber to control DMEA (a VOC) emissions. In order to render the requirements of 326 IAC 8-1-6 not applicable, the VOC emission limit must be prior to use of any controls. Also, the emission calculations for the core machines have been revised to more accurately reflect that VOC emissions at the core machines are based on catalyst emissions and emissions from resin usage. The source will limit the usage of DMEA catalyst and resin so that total VOC emissions from core machines CB-1 and CB-2, CB-3 and CB-4, CB-5, and Disa will be less than 25 tons per year. The sand throughput limitation will no longer be necessary.

Enforcement Issue

The source has had the following previous enforcement actions:

(1) Agreed Order Cause No. A-887, issued October 27, 1987 to Dana Corporation (the previous owner).

On March 17, 1987, the Emissions Sampling Section of the OAQ performed a fugitive dust test at this source. The test results showed that the source was in violation of 326 IAC 6-4-2(a)(3) which limits the ground level ambient air concentration to 50 micrograms per cubic meter above background concentrations for a 60-minute period. Also, while conducting this test, Mr. Victor Windle of the Emissions Sampling Section observed

emissions from a landfilling operation crossing the source's property line, which constitutes a violation of 326 IAC 6-4-2(a)(4).

Pursuant to this Agreed Order, the source, then owned by Dana Corporation, was required to comply with the requirements of 326 IAC 6-4-2, to submit a fugitive dust control plan according to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), and to submit a preventive maintenance plan for all air pollution control equipment at the New Castle foundry site. Dana Corporation submitted a fugitive dust control plan on December 1, 1987, which included a requirement to pave all access roads and a requirement to roof or enclose raw materials, products and waste storage to minimize fugitive dust generation.

Since that time, Grede Foundries, Inc. has paved all access roads at the source, and all scrap storage piles are equipped with roll-up doors so that they are not conducive for fugitive dust generation. Grede Foundries, Inc. submitted a new fugitive dust control plan on August 1, 1996, which incorporates all other requirements of the original dust control plan submitted by Dana Corporation to comply with the Agreed Order. The source is also required to comply with 326 IAC 6-4-2 and to prepare and maintain Compliance Response Plans for all the facilities at the source in this Part 70 permit. Therefore, the source has satisfied the requirements of the Agreed Order.

There are no enforcement actions pending currently.

Recommendation

The staff recommends to the Commissioner that the Part 70 permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application for the purposes of this review was received on August 1, 1996. Additional information was received on December 31, 1998 and November 29, 2001.

A notice of completeness letter was mailed to the source on June 23, 1997.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (14 pages).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	greater than 250
PM-10	greater than 250
SO_2	less than 100
VOC	greater than 250
CO	less than 100
NO_x	less than 100

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Chromium	less than 10
Manganese	greater than 10
Cobalt	less than 10
Nickel	less than 10
Arsenic	less than 10
Cadmium	less than 10
Selenium	less than 10
Lead	greater than 10
Naphthalene	less than 10
TOTAL	greater than 25

(a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM-10 and VOC are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(c) Fugitive Emissions
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2000 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	not reported
PM-10	146.61
SO_2	0.74

VOC	57.92
CO	3.19
NO_x	4.16
HAP (specify)	not reported

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 operating permit.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Electric Induction Furnaces #1 - #4	0.81	0.77	0.0	0.0	0.0	0.0	0.06
Charge Handling	56.98	34.88	0.0	0.0	0.0	0.0	1.78
Inoculation	78.66	63.46	0.0	0.46	0.0	0.0	2.46
Scrap Preheater	0.003	0.003	0.03	0.24	3.62	4.31	<0.1
#1 Mold Line Pouring & Cooling	3.30	1.70	0.77	5.40	0.0	0.38	0.10
#1 Mold Line Shakeout	2.58	1.78	0.0	45.90	0.0	0.0	0.08
#1 Mold Line Sand Handling	32.30	4.80	0.0	0.0	0.0	0.0	0.0
#2 Mold Line Pouring & Cooling (uncontrolled)	204.18	103.38	0.94	6.6	0.0	0.47	6.38
#2 Mold Line Cooling (controlled)	4.00	1.90	0.0	0.0	0.0	0.0	0.0
#2 Mold Line Shakeout	3.10	2.20	0.0	56.5	0.0	0.0	0.10
#2 Mold Line Sand Handling	33.90	5.10	0.0	0.0	0.0	0.0	0.0
Casting Grinding	0.48	0.47	0.0	0.0	0.0	0.0	0.47

Shotblasters #1 - #4	3.74	1.27	0.0	0.0	0.0	0.0	0.94
Sand Mixers and Core Machines	8.52	1.29	0.0	566.02	0.0	0.0	0.66
Core Sand Reclaim	0.47	0.07	0.0	0.0	0.0	0.0	0.0
Total Emissions	433.02	223.07	1.74	681.12	3.62	5.16	13.03

All emissions represent emissions after controls including all applicable metal throughput limits. However, the VOC emissions from the sand mixers and core machines represent the maximum allowable VOC emissions before controls. There is a scrubber to control DMEA (a VOC) emissions from the core machines, however, the scrubber is not required for compliance with the applicable VOC emission limits.

County Attainment Status

The source is located in Henry County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Henry County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Henry County has been classified as attainment or unclassifiable for all other regulated pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-5-2 (Emergency Reduction Plans)
The source has submitted an Emergency Reduction Plan (ERP) on August 1, 1996. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 2-2 (Prevention of Significant Deterioration)

This existing secondary metal production source, which is one of the 28 listed source categories, is a major PSD source. However, the source is not subject to the requirements of this rule based on the following information:

(a) The four (4) electric induction furnaces, the charge handling operation, the inoculation process, Mold Line #2, including two (2) shot blast machines (ID Nos. #3 Shot Blast and #4 Shot Blast) and seven (7) grinders, and four (4) core machines (ID 103, 106, N-321, and S-321 Core Machines) were each constructed prior to the rule applicability date of August 7, 1977, therefore, they are not subject to the requirements of this rule. However, the total potential PM emissions from these emission units are greater than 100 tons per year, therefore, the source was considered a major PSD source with respect to the subsequent modifications to the source.

(b) VOC emissions from core machines CB-1 and CB-2, both constructed in 1992, shall be limited to less than 25 tons per year as follows:

(1) The total resin usage for core machines CB-1 and CB-2 shall not exceed 185,695 pounds of resin per twelve (12) consecutive month period. Total DMEA usage for core machines CB-1 and CB-2 shall not exceed 40,515 pounds of DMEA per twelve (12) consecutive month period.

(2) The VOC emissions (not including DMEA) from core machines CB-1 and CB-2 shall not exceed 0.05 pound per pound of resin.

Note: VOC emissions are limited to less than 25 tons per year to also render the requirements of 326 IAC 8-1-6 not applicable. See below for detailed discussion of this rule.

(c) Mold Line #1 (including two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast) and four (4) grinders) and two (2) of the sand mixers (ID South Core Sand Mixer and North Core Sand Mixer), all installed in 1993, are not subject to this rule. When Mold Line #1 was installed in 1993, it was a replacement for an older mold line and was permitted under CP-065-2749-00007. The existing source was a major PSD source based on the potential emissions from the existing facilities. The net emissions increase resulting from the replacement of the older mold line with the new Mold Line #1, including PM emission control on Mold Line #1, a metal throughput limit on Mold Line #1 to limit the increase in VOC emissions to less than 40 tons per year, and controlled PM emissions from the two (2) sand mixers, was less than PSD major modification thresholds for each regulated pollutant, therefore, the requirements of 326 IAC 2-2 do not apply.

PM and PM10 emissions from the Mold Line #1 operations that exhaust through stack S-1 shall not exceed 18.24 and 10.12 pounds per hour, respectively. PM and PM10 emissions from the Mold Line #1 operations that exhaust through stack S-10 shall not exceed 0.63 and 0.16 pound per hour, respectively. PM and PM10 emissions from the North Core Sand Mixer shall not exceed 1.37 and 0.54 pounds per hour, respectively. PM and PM10 emissions from the South Core Sand Mixer shall not exceed 1.37 and 0.54 pounds per hour, respectively. These limits will insure that PM and PM10 emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line) do not exceed the major modification thresholds. The dust collectors controlling PM emissions from the #1 Mold Line and the two (2) bin vents controlling emissions from the two (2) sand mixers shall be in operation at all times that the mold line and sand mixers are in operation to comply with this limit.

Total VOC emissions from the Mold Line #1 Pouring and Shakeout operations shall not exceed 51.3 tons per year. The throughput of metal to Mold Line #1 shall not exceed 76,572 tons per twelve (12) consecutive month period. This metal throughput limit and maximum VOC emission rates for the Mold Line #1 Pouring and Shakeout operations of 0.14 and 1.2 pounds of VOC per ton of metal charged, respectively (based on U.S. EPA's FIRE data system, version 6.23), shall be used to demonstrate compliance with this limit. This limit will insure that VOC emissions (including the contemporaneous decrease in emissions from the replacement of the older mold line) do not exceed the major modification threshold of 40 tons per year.

VOC emissions from the core machine identified as Disa, also constructed in 1993, shall be limited to less than 25 tons per year as follows:

(1) The resin usage for the Disa core machine shall not exceed 185,695 pounds of resin per twelve (12) consecutive month period. DMEA usage for the Disa core machine shall not exceed 40,515 pounds of DMEA per twelve (12) consecutive month period.

(2) The VOC emissions (not including DMEA) from the Disa core machine shall not exceed 0.05 pound per pound of resin.

Note: VOC emissions are limited to less than 25 tons per year to also render the requirements of 326 IAC 8-1-6 not applicable. See below for detailed discussion of this rule.

(d) VOC emissions from core machines CB-3 and CB-4, both constructed in 1995, shall be limited to less than 25 tons per year as follows:

(1) The total resin usage for core machines CB-3 and CB-4 shall not exceed 185,695 pounds of resin per twelve (12) consecutive month period. Total DMEA usage for core machines CB-3 and CB-4 shall not exceed 40,515 pounds of DMEA per twelve (12) consecutive month period.

(2) The VOC emissions (not including DMEA) from core machines CB-3 and CB-4 shall not exceed 0.05 pound per pound of resin.

Note: VOC emissions are limited to less than 25 tons per year to also render the requirements of 326 IAC 8-1-6 not applicable. See below for detailed discussion of this rule.

(e) The one (1) sand mixer (ID New Core Sand Mixer), installed in 1995, is not subject to this rule because controlled PM and PM10 emissions are less than the PSD major modification thresholds. PM and PM10 emissions from the one (1) sand mixer (ID New Core Sand Mixer) shall not exceed 5.68 and 3.40 pounds per hour, respectively. These limits will insure that PM and PM10 emissions do not exceed the PSD major modification thresholds. The bin vent controlling emissions from the sand mixer shall be in operation at all times that the sand mixer is operating to comply with this limit.

(f) VOC emissions from core machine CB-5, constructed in 2000, shall be limited to less than 25 tons per year as follows:

(1) The resin usage for core machine CB-5 shall not exceed 237,143 pounds of resin per twelve (12) consecutive month period. DMEA usage for core machine CB-5 shall not exceed 37,943 pounds of DMEA per twelve (12) consecutive month

period.

(2) The VOC emissions (not including DMEA) from core machine CB-5 shall not exceed 0.05 pound per pound of resin.

Note: VOC emissions are limited to less than 25 tons per year to also render the requirements of 326 IAC 8-1-6 not applicable. See below for detailed discussion of this rule.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of PM-10 and VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2 (1), (2), or (3).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This source is subject to 326 IAC 6-5 for fugitive particulate matter emissions. The fugitive dust control plan for this source includes the following:

(a) Fugitive particulate matter emissions from the scrap yard shall be controlled by the following measures:

(i) Keep the area around the scrap piles clean.
(ii) Addition of water to paths on severe days (very dry), as required to limit dust generation.
(iii) Roll-up doors to scrap piles will be lowered as necessary to limit dust generation.

(b) Fugitive particulate matter emissions from paved roads and parking lots shall be controlled by sweeping all paved roads at least once per month, weather permitting.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1-1 (New Source Toxics Control)

326 IAC 2-4.1-1 applies to new or reconstructed facilities with potential emissions of any single HAP equal or greater than ten (10) tons per year and potential emissions of a combination of HAPs greater than or equal to twenty-five (25) tons per year. The rule does not apply to facilities that have been constructed before the effective date of this rule (July 27, 1997). Since all of the facilities at this source, except core machine CB-5, have been constructed and permitted prior to July 27, 1997, the requirements of 326 IAC 2-4.1-1 do not apply. Potential single and total HAP emissions from core machine CB-5 are less than 10 and 25 tons per year, respectively, therefore, it is not subject to this rule.

326 IAC 6-3-2 (Process Operations)

(a) The particulate matter (PM) from the emission units listed in the table below shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

The allowable emissions for each facility are as follows:

Emission Unit ID	Process Weight (tons/hr)	Allowable PM Emissions (lb/hr)	Controlled/Limited PM Emissions (lb/hr)	In Compliance?
Electric Induction Furnace #1	5.50	12.85	0.04	y
Electric Induction Furnace #2	5.50	12.85	0.04	y
Electric Induction Furnace #3	5.00	12.05	0.04	y
Electric Induction Furnace #4	5.00	12.05	0.04	y
Charge Handling	21.00	31.53	12.60	y
Inoculation	21.00	31.53	17.40	y
#1 Mold Line (Collectors #1 and #3)(1)	112.75*	52.49	8.69	y

Emission Unit ID	Process Weight (tons/hr)	Allowable PM Emissions (lb/hr)	Controlled/Limited PM Emissions (lb/hr)	In Compliance?
#1 Mold Line Casting Finishing (Collector #10)(2)	10.25	19.50	0.30	y
#2 Mold Line (Collector #5)(3)	118.30*	52.98	7.80	y
#2 Mold Line (Collector #2)(4)	118.30*	52.98	0.69	y
#2 Mold Line (Collector #6)(5)	10.75	20.13	0.30	y
#2 Mold Line Pouring	118.30*	52.98	30.28	y
#2 Mold Line Cooling (Uncontrolled)	118.30*	52.98	9.94	y
#2 Mold Line Casting Finishing (Collector #10)(6)	3.56	9.60	<0.1	y
New Core Sand Mixer & Sand Handling	9.00	17.87	0.65	y
North Core Sand Mixer & Sand Handling	9.00	17.87	0.65	y
South Core Sand Mixer & Sand Handling	9.00	17.87	0.65	y
Core Sand Reclaim	3.00	8.56	0.11	y

* Includes metal, sand, and core throughput.

(1) Includes metal pouring, metal cooling, mold shakeout, mold punch up, casting transfer, and sand handling for Mold Line #1, all of which are controlled by Collectors #1 and #3.

(2) Includes the two (2) shot blast machines (ID Nos. #1 Shot Blast and #2 Shot Blast) and four (4) grinders for Mold Line #1, all of which are controlled by Collector #10.

(3) Includes the mold punch-up operation, the metal cooling area following the punch-up operation, and the sand handling operations including the sand muller (ID Line #2 Muller), the return sand system, the casting and sand shaker conveyors, the sand transfer belt conveyors, and the sand shaker conveyors, all of which are controlled by Collector #5.

(4) Includes the mold shakeout operation, one (1) casting cooling feeder conveyor, one (1) casting cooling transfer conveyor, and one (1) sand cooler and associated feed belt, all of which are controlled by Collector #2.

(5) Includes the metal cooling area following the shakeout operation, the two (2) shot blast machines (ID Nos. #3 Shot Blast and #4 Shot Blast) and three (3) of the grinders in the casting finishing operation, and one (1) casting cooling transfer conveyor, all of which are controlled by Collector #6.

(6) Includes the four (4) grinders in the casting finishing operations of Mold Line #2 that exhaust to Collector #10.

The potential emissions from each of the electric induction furnaces are less than the 326 IAC 6-3-2 allowable emissions, therefore, the furnaces are in compliance with the rule.

The potential emissions from the charge handling operation are less than the 326 IAC 6-3-2

allowable, therefore, the charge handling operation is in compliance with the rule.

The collection hood and dust collector (ID Collector #7) shall be in operation at all times the inoculation process is in operation, in order to comply with this limit.

The two (2) dust collectors (ID Collector #1 and Collector #3) shall be in operation at all times the Mold Line #1 is in operation, in order to comply with these limits. The one (1) dust collector (ID Collector #10) shall be in operation at all times that the casting finishing operations of Mold Line #1 are in operation and the four (4) grinders in the casting finishing operations of Mold Line #2 are in operation, in order to comply with this limit.

The three (3) dust collectors (ID Collector #2, Collector #5, and Collector #6) shall be in operation and control emissions from the Mold Line #2 shakeout operation, one (1) casting cooling feeder conveyor, one (1) casting cooling transfer conveyor, one (1) sand cooler and associated feed belt, the sand handling systems and shotblasters #3 and #4 at all times that these units are in operation, in order to comply with the above limits.

The potential PM emissions from the Mold Line #2 pouring operation, which exhaust uncontrolled through stack S-11, are less than the 326 IAC 6-3-2 allowable, therefore, the Mold Line #2 pouring operation is in compliance with the rule.

The potential PM emissions from the metal cooling area following the metal pouring operation of Mold Line #2, which exhausts uncontrolled through Stack S-12, are less than the 326 IAC 6-3-2 allowable, therefore, this operation is in compliance with 326 IAC 6-3-2. The one (1) dust collector controlling emissions from the core sand reclaim system shall be in operation at all times the core sand reclaim system is in operation, in order to comply with this limit.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

This rule applies to new facilities, constructed after January 1, 1980, which have potential emissions of 25 tons or more per year of VOC.

(a) The #2 Mold Line pouring operation is not subject to the requirements of 326 IAC 8-1-6 because it was constructed prior to January 1, 1980. Potential VOC emissions from the inoculation process are less than 25 tons per year, and the process was constructed prior to January 1, 1980, therefore, this process is not subject to the requirements of 326 IAC 8-1-6.

(b) As part of the construction permit application for CP 065-2749-00007, a BACT analysis for the control of VOC emissions from the #1 Mold Line pouring and shakeout operations was included with the construction permit application for the installation of the #1 Mold Line, which was submitted on September 16, 1992. Potential VOC emissions on which the analysis was based were 44.46 tons per year from the #1 Mold Line shakeout operation and 5.2 tons per year from the #1 Mold Line pouring operation. Since potential VOC emissions, including the applicable metal throughput limit to render the requirements of 326 IAC 2-2 (PSD) not applicable, from the Mold Line #1 pouring and shakeout operations are only slightly higher (1.6 tons/yr higher) than the potential VOC emissions on which the analysis was based, the BACT analysis and determination is still valid. Therefore, no VOC emission control and the following VOC emission limits and production limit have been determined to be BACT for the #1 Mold Line Pouring and Shakeout operations:

(1) VOC emissions from the Mold Line #1 Pouring operation shall not exceed 0.14 pounds of VOC per ton of metal charged;

(2) VOC emissions from the Mold Line #1 Shakeout operation shall not exceed 1.2

pounds of VOC per ton of metal charged;

(3) The throughput of metal to Mold Line #1 shall not exceed 76,572 tons per twelve (12) consecutive month period.

(c) Potential VOC emissions from each of the ten (10) core machines are greater than 25 tons per year. Four (4) of the core machines (ID 106, 103, N-321, and S-321 Core Machines) were installed prior to January 1, 1980, therefore these four (4) core machines are not subject to this rule.

In order to render the requirements of 326 IAC 8-1-6 not applicable to the six (6) core machines identified as CB-1, CB-2, CB-3, CB-4, CB-5, and Disa, the following limits shall apply:

(1) VOC emissions from core machines CB-1 and CB-2, both constructed in 1992, shall be limited to less than 25 tons per year as follows:

(A) The total resin usage for core machines CB-1 and CB-2 shall not exceed 185,695 pounds of resin per twelve (12) consecutive month period. Total DMEA usage for core machines CB-1 and CB-2 shall not exceed 40,515 pounds of DMEA per twelve (12) consecutive month period.

(B) The VOC emissions (not including DMEA) from core machines CB-1 and CB-2 shall not exceed 0.05 pound per pound of resin.

(2) VOC emissions from core machines CB-3 and CB-4, both constructed in 1995, shall be limited to less than 25 tons per year as follows:

(A) The total resin usage for core machines CB-3 and CB-4 shall not exceed 185,695 pounds of resin per twelve (12) consecutive month period. Total DMEA usage for core machines CB-3 and CB-4 shall not exceed 40,515 pounds of DMEA per twelve (12) consecutive month period.

(B) The VOC emissions (not including DMEA) from core machines CB-3 and CB-4 shall not exceed 0.05 pound per pound of resin.

(3) VOC emissions from the core machine identified as Disa, also constructed in 1993, shall be limited to less than 25 tons per year as follows:

(A) The resin usage for the Disa core machine shall not exceed 185,695 pounds of resin per twelve (12) consecutive month period. DMEA usage for the Disa core machine shall not exceed 40,515 pounds of DMEA per twelve (12) consecutive month period.

(B) The VOC emissions (not including DMEA) from the Disa core machine shall not exceed 0.05 pound per pound of resin.

(4) VOC emissions from core machine CB-5, constructed in 2000, shall be limited to less than 25 tons per year as follows:

(A) The resin usage for core machine CB-5 shall not exceed 237,143 pounds of resin per twelve (12) consecutive month period. DMEA usage for core machine CB-5 shall not exceed 37,943 pounds of DMEA per twelve (12) consecutive month period.

(B) The VOC emissions (not including DMEA) from core machine CB-5 shall not exceed 0.05 pound per pound of resin.

326 IAC 8-6 (Organic Solvent Emission Limitations)

Pursuant to 326 IAC 8-6-1, this rule applies to existing sources as of January 1, 1980, located in Lake and Marion Counties, and sources commencing operation after October 7, 1974 and prior to January 1, 1980 located anywhere in the state with potential VOC emissions of 100 tons per year. This source is located in Henry County and commenced operation in 1968, therefore, it is not subject to the requirements of this rule.

326 IAC 11-1 (Emission Limitations for Specific Type of Operations)

Pursuant to 326 IAC 11-1-1, emission limitations are established for particulate matter from foundries. Particulate emissions from all foundries in operation on or before December 6, 1968 shall comply with the requirements set forth in section 2 of this rule. Section 2 of the rule limits PM emissions from foundry cupolas. There are no foundry cupolas at this source, therefore, the source is not subject to the requirements of 326 IAC 11-1-2.

Testing Requirements

Based on IDEM, OAQ's stack test requirement criteria, testing will be required for the following emission units and/or control devices:

(a) Stack S-7 (Collector #7) - The inoculation process must use Collector #7, which controls PM and PM10 emissions from the four (4) electric induction furnaces, the preheater, and the inoculation process, to comply with the PM emission limits pursuant to 326 IAC 6-3-2, therefore, a PM emissions test is required. To resolve the problem of testing Collector #7 for emissions from only the inoculation process, all the particulate matter emission limits for those units exhausting to Collector #7 will be combined into one overall limit. Compliance with the overall limit will satisfy compliance with each individual limit.

(b) Stack ID Nos. S-1 and S-10 (Collectors #1, #3, and #10) - Based on IDEM, OAQ's stack testing guidance, initial stack testing should have been required on the Mold Line #1 systems because potential PM and PM10 emissions before control are greater than 40 tons per year and control devices must be used to comply with the PM emission limits pursuant to 326 IAC 6-3-2 and the PM and PM10 PSD minor limits to render the requirements of 326 IAC 2-2 not applicable. Therefore, PM and PM10 testing will be required.

(c) Testing will not be required for the Mold Line #2 operations which exhaust through Collector #10 (Stack S-10) and stacks S-11 and S-12 since these operations do not require control to meet the PM emission limitations pursuant to 326 IAC 6-3-2 and potential emissions were based on standard emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22, or, in the case of casting grinding, from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, March, 1990, which are accepted emission factors for foundry operations.

(d) Stack ID Nos. S-2, S-5, and S-6 (Collectors #2, #5, and #6) - PM testing will still be required for Collectors #2, #5, and #6 which control emissions from the sand handling operations and the two (2) shotblasters (ID Nos. #3 Shot Blast and #4 Shot Blast) because based on IDEM, OAQ's stack testing guidance, initial stack testing should have been required on the these operations because they must use a control device to achieve compliance with the PM limits pursuant to 326 IAC 6-3-2. Since several operations exhaust through each of these collectors, compliance with the overall PM limits for each

collector will satisfy compliance with the limit for each operation controlled by that collector.

(e) Testing is not required for the scrubber controlling DMEA emissions from the core machines. Conservative emission factors were used to calculate potential DMEA emissions from the core machines, DMEA usage is equal to DMEA emissions, and the scrubber is not required to comply with the VOC emission limits to render the requirements of 326 IAC 8-1-6 and 326 IAC 2-2 not applicable.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The four (4) electric induction furnaces, the scrap preheater, and the inoculation process have applicable compliance monitoring conditions as specified below:

   (a) Visible emission notations of the stack exhaust (ID S-7) for the four (4) electric induction furnaces, the scrap preheater, and the inoculation process shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) The Permittee shall record the total static pressure drop across the dust collector (ID Collector #7) used in conjunction with the four (4) electric induction furnaces, the scrap preheater, and the inoculation process, at least once per shift when the four (4) electric induction furnaces, the scrap preheater, and the inoculation process are in operation when venting to the atmosphere. When for any one reading, the pressure drop across the dust collector is outside the normal range of 0.5 and 7.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) An inspection shall be performed each calender quarter of all bags controlling the four (4) electric induction furnaces, the scrap preheater, and the inoculation process when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

(d) In the event that bag failure has been observed:

(1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(2) For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the dust collector (Collector #7) for the four (4) electric induction furnaces, the scrap preheater, and the inoculation process must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

2. The Mold Line #1, including the casting/finishing operation, has applicable compliance monitoring conditions as specified below:

(a) Pursuant to CP-065-2749-00007, issued on March 24, 1993, the owner/operator of this source shall continue its program for ambient monitoring of PM-10, established in CP-065-2749-00007, consistent with guidelines established in 40 CFR Part 50, Appendix J and the IDEM Quality Assurance Manual. The owner may petition to have this monitoring requirement removed if it is established to the satisfaction of the Commissioner that ambient PM-10 levels will continue to comply with National Ambient Air Quality Standards (NAAQS), without adverse effect to the community. Data from this monitor shall be submitted on a quarterly basis in the format approved by the Commissioner.

(b) Visible emission notations of the Mold Line #1 stack exhausts (ID Nos. S-1 and S-10) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) The Permittee shall record the total static pressure drop across each of the three (3) dust collectors used in conjunction with Mold Line #1, at least once per shift when Mold Line #1 is in operation when venting to the atmosphere. When for any one reading, the pressure drop across either of the two (2) dust collectors identified as Collector #1 and Collector #3 is outside the normal range of 0.5 and 5.5 inches of water or a range established during the latest stack test, or the pressure drop across the dust collector identified as Collector #10 is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(d) An inspection shall be performed each calender quarter of all bags controlling Mold Line #1 when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

(e) In the event that bag failure has been observed:

(1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(2) For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the dust collectors controlling PM emissions from Mold Line #1 must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70) and to avoid the requirements of 326 IAC 2-2 (PSD).

3. The Mold Line #2, including the casting/finishing operation, has applicable compliance monitoring conditions as specified below:

(a) Visible emission notations of the Mold Line #2 stack exhausts (ID Nos. S-2, S-5, S-6, S-10, S-11, and S-12) shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(b) The Permittee shall record the total static pressure drop across each of the four (4) dust collectors used in conjunction with Mold Line #2, at least once per shift when Mold Line #2 is in operation when venting to the atmosphere. When for any one reading, the pressure drop across any of the three (3) dust collectors identified as Collector #2, Collector #5, and Collector #6 is outside the normal range of 0.5 and 7.5 inches of water or a range established during the latest stack test, or the pressure drop across the dust collector identified as Collector #10 is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(c) An inspection shall be performed each calender quarter of all bags controlling Mold Line #2 when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

(d) In the event that bag failure has been observed:

(1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

(2) For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the dust collectors controlling PM emissions from Mold Line #2 must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

There is no applicable compliance monitoring for the wet scrubber controlling DMEA emissions from the core machines since it is not required to comply with any applicable emission limits.

Conclusion

The operation of this gray iron and ductile iron foundry shall be subject to the conditions of the

attached proposed Part 70 Permit No. T065-6354-00007.

Appendix A: Emission Calculations Summary

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
CP: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity								
Pollutant	Electric Induction Furnaces (#1 - #4)	Charge Handling	Inoculation	Scrap Preheater (Insignificant Activity)	#1 Mold Line Pouring and Cooling	#1 Mold Line Shakeout	#1 Mold Line Sand Handling	#2 Mold Line Pouring and Cooling	**SUBTOTAL**
PM	89.34	56.98	379.78	0.33	194.69	148.38	1,616.20	401.98	2,887.7
PM10	85.64	34.88	306.18	0.33	98.59	105.28	242.40	200.38	1,073.7
SO2	0.00	0.00	0.00	0.03	0.90	0.00	0.00	0.94	1.9
NOx	0.00	0.00	0.00	4.31	0.45	0.00	0.00	0.47	5.2
VOC	0.00	0.00	0.46	0.24	6.30	53.90	0.00	6.60	67.5
CO	0.00	0.00	0.00	3.62	0.00	0.00	0.00	0.00	3.6
total HAPs	6.54	1.78	11.88	negl	6.09	4.68	0.00	6.38	37.3
worst case single HAP	(Lead) 5.01	(Manganese) 1.71	(Manganese) 11.41	negl	(Manganese) 5.85	(Manganese) 4.45	0.00	(Manganese) 6.13	(Manganese) 29.55

Total emissions based on rated capacity at 8,760 hours/year.

Note: PM and PM10 emissions from all operations except the #1 Mold Line Sand Handling operation and the Scrap Preheater include metallic HAP emissions calculated using emission factors from the USEPA computer database entitled "Speciate".

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity								
Pollutant	Electric Induction Furnaces (#1 - #4)	Charge Handling	Inoculation	Scrap Preheater (Insignificant Activity)	#1 Mold Line Pouring and Cooling	#1 Mold Line Shakeout	#1 Mold Line Sand Handling	#2 Mold Line Pouring and Cooling	**SUBTOTAL**
PM	0.81	56.98	78.66	2.9E-03	3.30	2.58	32.30	208.18	382.8
PM10	0.77	34.88	63.46	2.9E-03	1.70	1.78	4.80	105.28	212.7
SO2	0.00	0.00	0.00	0.03	0.77	0.00	0.00	0.94	1.7
NOx	0.00	0.00	0.00	4.31	0.38	0.00	0.00	0.47	5.2
VOC	0.00	0.00	0.46	0.24	5.40	45.90	0.00	6.60	58.6
CO	0.00	0.00	0.00	3.62	0.00	0.00	0.00	0.00	3.6
total HAPs	0.06	1.78	2.46	negl	0.10	0.08	0.00	6.38	10.9
worst case single HAP	(Lead) 0.05	(Manganese) 1.71	(Manganese) 2.36	negl	(Manganese) 0.10	(Manganese) 0.08	0.00	(Manganese) 6.13	(Manganese) 10.38

Total emissions based on rated capacity at 8,760 hours/year, after control.

Note: PM and PM10 emissions from all operations except the #1 Mold Line Sand Handling operation and the Scrap Preheater include metallic HAP emissions calculated using emission factors from the USEPA computer database entitled "Speciate".

Appendix A: Emission Calculations Summary

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
CP: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity								
Pollutant	#2 Mold Line Shakeout	#2 Mold Line Sand Handling	Casting Grinding	Shotblast Operations (Shotblasters #1 - #4)	Sand Mixers and Core Machines	Core Sand Reclaim (Insignificant Activity)		**SUBTOTAL**	**SOURCE TOTAL**
PM	155.61	1,695.10	23.96	1,576.88	425.70	47.30		3924.5	6,812.2
PM10	110.41	254.30	23.72	203.08	63.90	7.10		662.5	1,736.2
SO2	0.00	0.00	0.00	0.00	0.00	0.00		0.0	1.9
NOx	0.00	0.00	0.00	0.00	0.00	0.00		0.0	5.2
VOC	56.50	0.00	0.00	0.00	708.60	0.00		765.1	832.6
CO	0.00	0.00	0.00	0.00	0.00	0.00		0.0	3.6
total HAPs	4.91	0.00	23.53	50.48	0.82	0.00		79.7	117.1
worst case single HAP	(Manganese) 4.67	0.00	(Manganese) 22.60	(Manganese) 48.47	(Naphthalene) 0.82	0.00		(Manganese) 75.7	(Manganese) 105.3

Total emissions based on rated capacity at 8,760 hours/year.
Note: PM and PM10 emissions from all operations except the #2 Mold Line Sand Handling operation, the core machines, the sand mixers, and the core sand reclaim system include metallic HAP emissions calculated using emission factors from the USEPA computer database entitled "Speciate".

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity								
Pollutant	#2 Mold Line Shakeout	#2 Mold Line Sand Handling	Casting Grinding	Shotblast Operations (Shotblasters #1 - #4)	Sand Mixers and Core Machines	Core Sand Reclaim (Insignificant Activity)		**SUBTOTAL**	**SOURCE TOTAL**
PM	3.10	33.90	0.48	3.74	8.52	0.47		50.2	433.0
PM10	2.20	5.10	0.47	1.27	1.29	0.07		10.4	223.1
SO2	0.00	0.00	0.00	0.00	0.00	0.00		0.0	1.7
NOx	0.00	0.00	0.00	0.00	0.00	0.00		0.0	5.2
VOC	56.50	0.00	0.00	0.00	109.59	0.00		166.1	224.7
CO	0.00	0.00	0.00	0.00	0.00	0.00		0.0	3.6
total HAPs	0.10	0.00	0.47	0.94	0.66	0.00		2.2	13.0
worst case single HAP	(Manganese) 0.09	0.00	(Manganese) 0.45	(Manganese) 0.90	(Naphthalene) 0.66	0.00		(Manganese) 1.4	(Manganese) 11.8

Total emissions based on rated capacity at 8,760 hours/year, after control.
Note: PM and PM10 emissions from all operations except the #2 Mold Line Sand Handling operation, the core machines, the sand mixers, and the core sand reclaim system include metallic HAP emissions calculated using emission factors from the USEPA computer database entitled "Speciate".

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

SCC# 3-04-003-03
Electric Induction Furnaces

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device:	Baghouse #7	**326 IAC 6-3-2 Allowable PM Emission Calculation:**
			Control Efficiency:	99.1%	E = 4.1 * (P^0.67) for P<30 tons/hr
Iron	42000	21			For Frn. #1 & #2 P = 5.5
					E (lb/hr) = 12.85
					For Frn. #3 & #4 P = 5
					E (lb/hr) = 12.05

	PM lbs/ton metal charged 0.9	**PM10** lbs/ton metal charged 0.86	**SOx** lbs/ton metal charged 0.00	**NOx** lbs/ton metal charged 0.00	**VOC** lbs/ton metal charged 0.00	**CO** lbs/ton metal charged 0.00	**Lead** lbs/ton metal charged 0.0545
Potential Uncontrolled Emissions lbs/hr	18.9	18.1	0.0	0.0	0.0	0.0	1.14
Potential Uncontrolled Emissions lbs/day	453.6	433.4	0.0	0.0	0.0	0.0	27.5
Potential Uncontrolled Emissions tons/year	**82.8**	**79.1**	**0.0**	**0.0**	**0.0**	**0.0**	**5.01**
Potential Controlled Emissions lbs/hr	0.17	0.16	0.0	0.0	0.0	0.0	1.0E-02
Potential Controlled Emissions lbs/day	4.1	3.9	0.0	0.0	0.0	0.0	0.25
Potential Controlled Emissions tons/year	**0.75**	**0.71**	**0.0**	**0.0**	**0.0**	**0.0**	**4.5E-02**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.
The emission factor for lead represents the average emission factor from FIRE version 6.22.

SCC# 3-04-003-15
Charge Handling

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	**326 IAC 6-3-2 Allowable PM Emission Calculation:**
			E = 4.1 * (P^0.67) for P<30 tons/hr
Metal	42000	21	E (lb/hr) = 31.53

	PM lbs/ton metal charged 0.6	**PM10** lbs/ton metal charged 0.36	**SOx** lbs/ton metal charged 0.00	**NOx** lbs/ton metal charged 0.00	**VOC** lbs/ton metal charged 0.00	**CO** lbs/ton metal charged 0.00	**Lead** lbs/ton metal charged 0.00
Potential Uncontrolled Emissions lbs/hr	12.6	7.6	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	302.4	181.4	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**55.2**	**33.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	12.6	7.6	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	302.4	181.4	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**55.2**	**33.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: Emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

SCC# 3-04-003-10
Inoculation

TYPE OF MATERIAL		Throughput LBS/HR	Throughput TON/HR	Control Device: / Control Efficiency:	Hood to Baghouse #7 / 79.28%	**326 IAC 6-3-2 Allowable PM Emission Calculation:** E = 4.1 * (P^0.67) for P<30 tons/hr; E (lb/hr) = 31.53
Metal		42000	21			

	PM lbs/ton metal inoculated 4.0	**PM10** lbs/ton metal inoculated 3.2	**SOx** lbs/ton metal inoculated 0.00	**NOx** lbs/ton metal inoculated 0.00	**VOC** lbs/ton metal inoculated 0.005	**CO** lbs/ton metal inoculated 0.00	**Lead** lbs/ton metal inoculated 0.00
Potential Uncontrolled Emissions lbs/hr	84.0	67.2	0.0	0.0	0.11	0.0	0.0
Potential Uncontrolled Emissions lbs/day	2016.0	1612.8	0.0	0.0	2.5	0.0	0.0
Potential Uncontrolled Emissions tons/year	**367.9**	**294.3**	**0.0**	**0.0**	**0.46**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	17.4	13.9	0.0	0.0	0.11	0.0	0.0
Potential Controlled Emissions lbs/day	417.7	334.2	0.0	0.0	2.5	0.0	0.0
Potential Controlled Emissions tons/year	**76.2**	**61.0**	**0.0**	**0.0**	**0.46**	**0.0**	**0.0**

Note: PM and VOC emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.
PM10 emission factor from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, March 1990.

SCC# 3-04-003-20
#1 Mold Line Pouring and Cooling

TYPE OF MATERIAL		LBS/HR	TON/HR	Control Device: / Control Efficiency:	Baghouse #1 and #3 / 98.00%	**326 IAC 6-3-2 Allowable PM Emission Calculation:** E = 55 * (P^0.11) - 40 for P > 30 tons/hr; For Mold Line #1 P = 112.75; E (lb/hr) = 52.49
Iron	Maximum Throughput:	20500	10.25			
	Limited Throughput:	17482	8.74			

	PM lbs/ton metal charged 4.2	**PM10** lbs/ton metal charged 2.06	**SOx** lbs/ton metal charged 0.02	**NOx** lbs/ton metal charged 0.01	**VOC** lbs/ton metal charged 0.14	**CO** lbs/ton metal charged 0.00	**Lead** lbs/ton metal charged 0.00
Potential Uncontrolled Emissions lbs/hr	43.1	21.1	0.21	0.10	1.4	0.0	0.0
Potential Uncontrolled Emissions lbs/day	1033.2	506.8	4.9	2.5	34.4	0.0	0.0
Potential Uncontrolled Emissions tons/year	**188.6**	**92.5**	**0.90**	**0.45**	**6.3**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.73	0.36	0.17	0.09	1.2	0.0	0.0
Potential Controlled Emissions lbs/day	17.6	8.6	4.2	2.1	29.4	0.0	0.0
Potential Controlled Emissions tons/year	**3.2**	**1.6**	**0.77**	**0.38**	**5.4**	**0.0**	**0.0**

Note: All emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.
Controlled SOx, NOx, and VOC emissions represent emissions after the limited metal throughput.

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

SCC# 3-04-003-31
#1 Mold Line Shakeout

Control Device: Baghouse #1 and #3
Control Efficiency: 98.00%

TYPE OF MATERIAL		LBS/HR	TON/HR
Iron	Maximum Throughput:	20500	10.25
	Limited Throughput:	17482	8.74

	PM lbs/ton metal charged 3.2	PM10 lbs/ton metal charged 2.24	SOx lbs/ton metal charged 0.0	NOx lbs/ton metal charged 0.0	VOC lbs/ton metal charged 1.2	CO lbs/ton metal charged 0.0	Lead lbs/ton metal charged 0.0
Potential Uncontrolled Emissions lbs/hr	32.8	23.0	0.0	0.0	12.3	0.0	0.0
Potential Uncontrolled Emissions lbs/day	787.2	551.0	0.0	0.0	295.2	0.0	0.0
Potential Uncontrolled Emissions tons/year	**143.7**	**100.6**	**0.0**	**0.0**	**53.9**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.56	0.39	0.0	0.0	10.5	0.0	0.0
Potential Controlled Emissions lbs/day	13.4	9.4	0.0	0.0	251.7	0.0	0.0
Potential Controlled Emissions tons/year	**2.5**	**1.7**	**0.0**	**0.0**	**45.9**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.
Controlled VOC emissions represent emissions after the limited metal throughput.

SCC# 3-04-003-50
#1 Mold Line Sand Handling

Throughput
Control Device: Baghouse #1 and #3
Control Efficiency: 98.00%

TYPE OF MATERIAL	LBS/HR	TON/HR
Sand	205000	102.5

	PM lbs/ton sand handled 3.6	PM10 lbs/ton sand handled 0.54	SOx lbs/ton sand handled 0.0	NOx lbs/ton sand handled 0.0	VOC lbs/ton sand handled 0.0	CO lbs/ton sand handled 0.0	Lead lbs/ton sand handled 0.0
Potential Uncontrolled Emissions lbs/hr	369.0	55.4	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	8856.0	1328.4	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**1616.2**	**242.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	7.4	1.1	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	177.1	26.6	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**32.3**	**4.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

SCC# 3-04-003-18, 20
#2 Mold Line Pouring/Casting and Cooling (exhausting through stacks S-11, S-12, and general ventilation)

TYPE OF MATERIAL		Throughput LBS/HR	TON/HR	Control Device: / Control Efficiency:	N/A / N/A	**326 IAC 6-3-2 Allowable PM Emission Calculation:** E = 55 * (P^0.11) - 40 for P > 30 tons/hr; For Mold Line #2 P = 118.3; E (lb/hr) = 52.98
Iron		21500	10.75			

	PM lbs/ton metal charged 4.2	**PM10** lbs/ton metal charged 2.06	**SOx** lbs/ton metal charged 0.02	**NOx** lbs/ton metal charged 0.01	**VOC** lbs/ton metal charged 0.14	**CO** lbs/ton metal charged 0.00	**Lead** lbs/ton metal charged 0.00
Potential Uncontrolled Emissions lbs/hr	45.2	22.1	0.22	0.11	1.5	0.0	0.0
Potential Uncontrolled Emissions lbs/day	1083.6	531.5	5.2	2.6	36.1	0.0	0.0
Potential Uncontrolled Emissions tons/year	**197.8**	**97.0**	**0.94**	**0.47**	**6.6**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	45.2	22.1	0.22	0.11	1.5	0.0	0.0
Potential Controlled Emissions lbs/day	1083.6	531.5	5.2	2.6	36.1	0.0	0.0
Potential Controlled Emissions tons/year	**197.8**	**97.0**	**0.94**	**0.47**	**6.6**	**0.0**	**0.0**

Note: All emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.

SCC# 3-04-003-18
#2 Mold Line Cooling (following punch-up operation)

TYPE OF MATERIAL		Throughput LBS/HR	TON/HR	Control Device: / Control Efficiency:	Baghouse #5 / 98.00%	**326 IAC 6-3-2 Allowable PM Emission Calculation:** E = 55 * (P^0.11) - 40 for P > 30 tons/hr; For Mold Line #2 P = 118.3; E (lb/hr) = 52.98
Iron		21500	10.75			

	PM lbs/ton metal charged 4.2	**PM10** lbs/ton metal charged 2.06	**SOx** lbs/ton metal charged 0.00	**NOx** lbs/ton metal charged 0.00	**VOC** lbs/ton metal charged 0.00	**CO** lbs/ton metal charged 0.00	**Lead** lbs/ton metal charged 0.00
Potential Uncontrolled Emissions lbs/hr	45.2	22.1	0.00	0.00	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	1083.6	531.5	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**197.8**	**97.0**	**0.00**	**0.00**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.90	0.44	0.00	0.00	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	1083.6	10.6	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**4.0**	**1.9**	**0.00**	**0.00**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's AP-42.

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

SCC# 3-04-003-31
#2 Mold Line Shakeout

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device: / Control Efficiency:	
Iron	21500	10.75	Control Device:	Baghouse #2
			Control Efficiency:	98.00%

	PM lbs/ton metal charged	PM10 lbs/ton metal charged	SOx lbs/ton metal charged	NOx lbs/ton metal charged	VOC lbs/ton metal charged	CO lbs/ton metal charged	Lead lbs/ton metal charged
	3.2	2.24	0.0	0.0	1.2	0.0	0.0
Potential Uncontrolled Emissions lbs/hr	34.4	24.1	0.0	0.0	12.9	0.0	0.0
Potential Uncontrolled Emissions lbs/day	825.6	577.9	0.0	0.0	309.6	0.0	0.0
Potential Uncontrolled Emissions tons/year	**150.7**	**105.5**	**0.0**	**0.0**	**56.5**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.69	0.48	0.0	0.0	12.9	0.0	0.0
Potential Controlled Emissions lbs/day	16.5	11.6	0.0	0.0	309.6	0.0	0.0
Potential Controlled Emissions tons/year	**3.0**	**2.1**	**0.0**	**0.0**	**56.5**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.

SCC# 3-04-003-50
#2 Mold Line Sand Handling

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device: / Control Efficiency:	
Sand	215000	107.5	Control Device:	Baghouses #2 and #5
			Control Efficiency:	98.00%

	PM lbs/ton sand handled	PM10 lbs/ton sand handled	SOx lbs/ton sand handled	NOx lbs/ton sand handled	VOC lbs/ton sand handled	CO lbs/ton sand handled	Lead lbs/ton sand handled
	3.6	0.54	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/hr	387.0	58.1	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	9288.0	1393.2	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**1695.1**	**254.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	7.7	1.2	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	185.8	27.9	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**33.9**	**5.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

SCC# 3-04-003-60
Casting Grinding

Control Device: Baghouses #6 and #10
Control Efficiency: 98.00%

326 IAC 6-3-2 Allowable PM Emission Calculation:
E = 4.1 * (P^0.67) for P<30 tons/hr
P for each grinder = 0.89
E for each grinder (lb/hr) = 3.79

TYPE OF MATERIAL		LBS/HR	TON/HR
Iron		42000	9.79

	PM lbs/ton metal charged	**PM10** lbs/ton metal charged	**SOx** lbs/ton metal charged	**NOx** lbs/ton metal charged	**VOC** lbs/ton metal charged	**CO** lbs/ton metal charged	**Lead** lbs/ton metal charged
	0.01	0.0045	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/hr	0.10	4.4E-02	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	2.3	1.1	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**0.43**	**0.19**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	2.0E-03	8.8E-04	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	0.05	2.1E-02	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**8.6E-03**	**3.9E-03**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM10 emission factor from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.
PM emission factor from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, March 1990.

SCC# 3-04-003-40
Shotblast Operations (Shot Blasters #1 and #2)

Control Device: Baghouse #10
Control Efficiency: 99.80%

326 IAC 6-3-2 Allowable PM Emission Calculation:
E = 4.1 * (P^0.67) for P<30 tons/hr
P for each shotblaster = 5.125
E for each shotblaster (lb/hr) = 12.25

TYPE OF MATERIAL		LBS/HR	TON/HR
Iron	Maximum Throughput:	20500	10.25
	Limited Throughput:	17482	8.74

	PM lbs/ton metal charged	**PM10** lbs/ton metal charged	**SOx** lbs/ton metal charged	**NOx** lbs/ton metal charged	**VOC** lbs/ton metal charged	**CO** lbs/ton metal charged	**Lead** lbs/ton metal charged
	17.0	1.7	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/hr	174.3	17.4	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	4182.0	418.2	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**763.2**	**76.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.3	0.03	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	7.1	0.71	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**1.3**	**0.13**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

SCC# 3-04-003-40
Shotblast Operations (Shotblasters #3 and #4)

TYPE OF MATERIAL		Throughput LBS/HR	Throughput TON/HR	Control Device: / Control Efficiency:	Baghouse #6 / 98.00%	**326 IAC 6-3-2 Allowable PM Emission Calculation:** E = 4.1 * (P^0.67) for P<30 tons/hr; P for each shotblaster = 5.375; E for each shotblaster (lb/hr) = 12.65
Iron		21500	10.8			

	PM lbs/ton metal charged 17.0	**PM10** lbs/ton metal charged 1.7	**SOx** lbs/ton metal charged 0.0	**NOx** lbs/ton metal charged 0.0	**VOC** lbs/ton metal charged 0.0	**CO** lbs/ton metal charged 0.0	**Lead** lbs/ton metal charged 0.0
Potential Uncontrolled Emissions lbs/hr	174.3	17.4	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	4182.0	418.2	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**763.2**	**76.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.3	0.03	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	8.4	0.84	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**1.5**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.

New Core Sand Mixer & Sand Handling

TYPE OF MATERIAL		Throughput LBS/HR	Throughput TON/HR	Control Device: / Control Efficiency:	Bin Vent 4 / 98.00%	**326 IAC 6-3-2 Allowable PM Emission Calculation:** E = 4.1 * (P^0.67) for P<30 tons/hr; P = 9; E (lb/hr) = 17.87
Sand		18000.0	9.0			

	PM lbs/ton sand handled 3.6	**PM10** lbs/ton sand handled 0.54	**SOx** lbs/ton sand handled 0.0	**NOx** lbs/ton sand handled 0.0	**VOC** lbs/ton sand handled 0.00	**CO** lbs/ton sand handled 0.0	**Lead** lbs/ton sand handled 0.0
Potential Uncontrolled Emissions lbs/hr	32.4	4.9	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	777.6	116.6	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**141.9**	**21.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.65	0.10	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	15.55	2.33	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**2.84**	**0.43**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.
See Appendix A, page 11 for VOC emission calculations.

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

North Core Sand Mixer & Sand Handling

326 IAC 6-3-2 Allowable PM Emission Calculation:
E = 4.1 * (P^0.67) for P<30 tons/hr
P = 9
E (lb/hr) = 17.87

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device:	Bin Vent 2
			Control Efficiency:	98.00%
Sand	18000.0	9.0		

	PM lbs/ton sand handled 3.6	PM10 lbs/ton sand handled 0.54	SOx lbs/ton sand handled 0.0	NOx lbs/ton sand handled 0.0	VOC lbs/ton sand handled 0.00	CO lbs/ton sand handled 0.0	Lead lbs/ton sand handled 0.0
Potential Uncontrolled Emissions lbs/hr	32.4	4.9	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	777.6	116.6	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**141.9**	**21.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.65	0.10	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	15.55	2.33	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**2.84**	**0.43**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.
See Appendix A, page 11 for VOC emission calculations.

South Core Sand Mixer & Sand Handling

326 IAC 6-3-2 Allowable PM Emission Calculation:
E = 4.1 * (P^0.67) for P<30 tons/hr
P = 9
E (lb/hr) = 17.87

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device:	Bin Vent 3
			Control Efficiency:	98.00%
Sand	18000.0	9.0		

	PM lbs/ton sand handled 3.6	PM10 lbs/ton sand handled 0.54	SOx lbs/ton sand handled 0.0	NOx lbs/ton sand handled 0.0	VOC lbs/ton sand handled 0.00	CO lbs/ton sand handled 0.0	Lead lbs/ton sand handled 0.0
Potential Uncontrolled Emissions lbs/hr	32.4	4.9	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	777.6	116.6	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**141.9**	**21.3**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.65	0.10	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	15.55	2.33	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**2.84**	**0.43**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.23.
See Appendix A, page 11 for VOC emission calculations.

Appendix A: Grey Iron Foundry Operations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

SCC# 3-04-003-50
Core Sand Reclaim System

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device:	Baghouse
			Control Efficiency:	99.00%
Sand	6000	3.0		

	PM **lbs/ton sand handled** 3.6	**PM10** **lbs/ton sand handled** 0.54	**SOx** **lbs/ton sand handled** 0.0	**NOx** **lbs/ton sand handled** 0.0	**VOC** **lbs/ton sand handled** 0.0	**CO** **lbs/ton sand handled** 0.0	**Lead** **lbs/ton sand handled** 0.0
Potential Uncontrolled Emissions lbs/hr	10.8	1.6	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	259.2	38.9	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**47.3**	**7.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	0.11	0.02	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions lbs/day	2.59	0.39	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**0.47**	**0.07**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: PM and PM10 emission factors from USEPA's Factor Information Retrieval (FIRE) Data System, version 6.22.

Company Name: Grede Foundries, Inc. - New Castle Foundry
Plant Location: 2700 East Plum Street, New Castle, Indiana 47362
County: Henry
Permit Reviewer: Trish Earls/EVP
Title V #: T065-6354
Plt. ID #: 065-00007

Phenolic Urethane Cold Box Core Making

Machine	Date of Construction	Capacity (tons cores/hr)	Maximum Resin Content (%)	VOC Emission Factor from Resin Evaporation (lb/ton cores)	Max DMEA Usage (lb DMEA/ton cores)	Potential VOC Emissions from resin evap (tons/yr)	Potential DMEA Emissions from DMEA usage (tons/yr)	Total Potential VOC Emissions (tons/yr)
CB-1	1992	1.5	1.1%	1.1	4.8	7.23	31.54	38.76
CB-2	1992	1.5	1.1%	1.1	4.8	7.23	31.54	38.76
CB-3	1995	1.5	1.1%	1.1	4.8	7.23	31.54	38.76
CB-4	1995	1.5	1.1%	1.1	4.8	7.23	31.54	38.76
CB-5	2000	1.5	1.5%	1.5	4.8	9.86	31.54	41.39
Disa	1993	1.77	1.1%	1.1	4.8	8.53	37.21	45.74
103	1972	5.1	1.0%	1.0	4.8	22.34	107.22	129.56
106	1974	5.1	1.0%	1.0	4.8	22.34	107.22	129.56
N-321	1976	4.08	1.0%	1.0	4.8	17.87	85.78	103.65
S-321	1976	4.08	1.0%	1.0	4.8	17.87	85.78	103.65
Total						127.71	580.89	708.60

Limits Necessary to render 326 IAC 8-1-6 (BACT) and 326 IAC 2-2 (PSD) not applicable:

Core Machines	VOC limit (tons/yr)	VOC EF for resin evaporation (lb/ton cores)	VOC EF for resin evaporation (lb VOC/lb resin)	DMEA EF (lb/ton cores)	core production (tons cores/yr)	DMEA usage limit (lbs/yr)	resin usage limit (lbs/yr)
CB-1 CB-2	24.9	1.1	0.05	4.8	8,441	40,515	185,695
CB-3 CB-4	24.9	1.1	0.05	4.8	8,441	40,515	185,695
CB-5	24.9	1.5	0.05	4.8	7,905	37,943	237,143
Disa	24.9	1.1	0.05	4.8	8,441	40,515	185,695
103	129.56	1	0.05	4.8	44,676	N/A	N/A
106	129.56	1	0.05	4.8	44,676	N/A	N/A
N-321	103.65	1	0.05	4.8	35,741	N/A	N/A
S-321	103.65	1	0.05	4.8	35,741	N/A	N/A
Total	**566.02**				**194,060**		

Core Machines	Controlled DMEA Emissions (tons/yr)	Limited VOC Emissions from Resin (tons/yr)	DMEA Scrubber Control Eff. (%)
CB-1 CB-2	0.41	4.64	98.00%
CB-3 CB-4	0.41	4.64	98.00%
CB-5	0.38	5.93	98.00%
Disa	0.41	4.64	98.00%
103	2.14	22.34	98.00%
106	2.14	22.34	98.00%
N-321	1.72	17.87	98.00%
S-321	1.72	17.87	98.00%
Total	**9.31**	**100.27**	

Total VOC Emissions after control (tons/yr): **109.59**

Appendix A: Grey Iron Foundry Operations
HAP Emissions

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

Process	SCC #	Metal throughput (tons/hr)	Limited Throughput (tons/hr)	Pollutant	Emission Factor (lbs/ton metal)	Control Efficiency %	Potential HAP Emissions (tons/yr)	Controlled HAP Emissions (tons/yr)
Electric Induction Furnaces	3-04-003-03	21	N/A	Chromium	0.00022	99.10%	0.020	0.000
				Manganese	0.0153		1.407	0.013
				Cobalt	0.00002		0.002	0.000
				Nickel	0.00088		0.081	0.001
				Arsenic	0.00011		0.010	0.000
				Cadmium	0.00011		0.010	0.000
				Selenium	0.00001		0.001	0.000
						SUBTOTAL	**1.531**	**0.014**
Charge Handling	3-04-003-15	21	N/A	Chromium	0.00023	N/A	0.021	0.021
				Manganese	0.0186		1.711	1.711
				Cobalt	0.00002		0.002	0.002
				Nickel	0.0004		0.037	0.037
				Arsenic	0.00008		0.007	0.007
				Cadmium	0.00004		0.004	0.004
				Selenium	0.00001		0.001	0.001
						SUBTOTAL	**1.783**	**1.783**
Inoculation	3-04-003-10	21	N/A	Chromium	0.00152	79.28%	0.140	0.029
				Manganese	0.124		11.406	2.363
				Cobalt	0.00012		0.011	0.002
				Nickel	0.00268		0.247	0.051
				Arsenic	0.00052		0.048	0.010
				Cadmium	0.00024		0.022	0.005
				Selenium	0.00004		0.004	0.001
						SUBTOTAL	**11.876**	**2.461**
#1 Mold Line Pouring	3-04-003-20	10.25	8.74	Chromium	0.0016	98.00%	0.072	0.001
				Manganese	0.1302		5.845	0.100
				Cobalt	0.00013		0.006	0.000
				Nickel	0.00281		0.126	0.002
				Arsenic	0.00055		0.025	0.000
				Cadmium	0.00025		0.011	0.000
				Selenium	0.00004		0.002	0.000
						SUBTOTAL	**6.087**	**0.104**
#1 Mold Line Shakeout	3-04-003-31	10.25	8.74	Chromium	0.00122	98.00%	0.055	0.001
				Manganese	0.0992		4.454	0.076
				Cobalt	0.001		0.045	0.001
				Nickel	0.00214		0.096	0.002
				Arsenic	0.00042		0.019	0.000
				Cadmium	0.00019		0.009	0.000
				Selenium	0.00003		0.001	0.000
						SUBTOTAL	**4.678**	**0.080**
#2 Mold Line Pouring	3-04-003-20	10.75	N/A	Chromium	0.0016	0.00%	0.075	0.075
				Manganese	0.1302		6.130	6.130
				Cobalt	0.00013		0.006	0.006
				Nickel	0.00281		0.132	0.132
				Arsenic	0.00055		0.026	0.026
				Cadmium	0.00025		0.012	0.012
				Selenium	0.00004		0.002	0.002
						SUBTOTAL	**6.384**	**6.384**
#2 Mold Line Shakeout	3-04-003-31	10.75	N/A	Chromium	0.00122	98.00%	0.057	0.001
				Manganese	0.0992		4.671	0.093
				Cobalt	0.001		0.047	0.001
				Nickel	0.00214		0.101	0.002
				Arsenic	0.00042		0.020	0.000
				Cadmium	0.00019		0.009	0.000
				Selenium	0.00003		0.001	0.000
						SUBTOTAL	**4.906**	**0.098**
Shotblast #1 - #4	3-04-003-40	21	19.54	Chromium	0.00646	98.00%	0.594	0.011
				Manganese	0.527		48.473	0.902
				Cobalt	0.00051		0.047	0.001
				Nickel	0.01139		1.048	0.019
				Arsenic	0.00221		0.203	0.004
				Cadmium	0.00102		0.094	0.002
				Selenium	0.00017		0.016	0.000
						SUBTOTAL	**50.475**	**0.939**
Casting Grinding	3-04-003-60	9.79	9.79	Chromium	0.00646	98.00%	0.277	0.006
				Manganese	0.527		22.598	0.452
				Cobalt	0.00051		0.022	0.000
				Nickel	0.01139		0.488	0.010
				Arsenic	0.00221		0.095	0.002
				Cadmium	0.00102		0.044	0.001
				Selenium	0.00017		0.007	0.000
						SUBTOTAL	**23.531**	**0.471**
						Total HAP Emissions (tons/yr):	**111.25**	**12.33**
						Worst Case Single HAP Emissions (tons/yr):	**106.70**	**11.84**

Methodology:

Emission factors were obtained from the USEPA computer database entitled "Speciate", and chemical manufacturers.

Potential HAP emissions (tons/yr) = Metal throughput (tons/hr) * Emission Factor (lbs/ton metal) * (8,760 hrs/yr) * (1 ton/2,000 lbs)

Controlled HAP emissions (tons/yr) = Metal throughput (tons/hr) * Emission Factor (lbs/ton metal) * (8,760 hrs/yr) * (1 ton/2,000 lbs) * (1-Control Efficiency)

Appendix A: Grey Iron Foundry Operations
HAP Emission Calculations

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
Operating Permit No.: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

Material	Process	Maximum Usage (lbs/hr)	Weight % Phenol	Weight % MDI	Weight % Naphthalene	Weight % Polymeric Diphenyl methane	Phenol Emissions (ton/yr)	MDI Emissions (ton/yr)	Naphthalene Emissions (ton/yr)	Polymeric Diphenylmethane Emissions (ton/yr)
Phenolic Urethane Cold Box Core Making										
Part I Binder	Disa, CB-1 - CB-5	99.00	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.28	0.00
Part II Binder	Disa, CB-1 - CB-5	81.00	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
Part I Binder	103 & 106	99.00	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.28	0.00
Part II Binder	103 & 106	81.00	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
Part I Binder	N-321 & S-321	89.76	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.26	0.00
Part II Binder	N-321 & S-321	73.44	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
							0.00	**0.00**	**0.82**	**0.00**

Total Potential Emissions:

Total HAPs (tons/yr)
0.82

Material	Process	Limited Usage (lbs/hr)	Weight % Phenol	Weight % MDI	Weight % Naphthalene	Weight % Polymeric Diphenyl methane	Phenol Emissions (ton/yr)	MDI Emissions (ton/yr)	Naphthalene Emissions (ton/yr)	Polymeric Diphenylmethane Emissions (ton/yr)
Phenolic Urethane Cold Box Core Making										
Part I Binder	Disa, CB-1 - CB-5	43.13	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.12	0.00
Part II Binder	Disa, CB-1 - CB-5	35.29	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
Part I Binder	103 & 106	99.00	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.28	0.00
Part II Binder	103 & 106	81.00	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
Part I Binder	N-321 & S-321	89.76	6.50%	0.00%	2.00%	0.00%	0.00	0.00	0.26	0.00
Part II Binder	N-321 & S-321	73.44	0.00%	42.00%	0.00%	35.00%	0.00	0.00	0.00	0.00
							0.00	**0.00**	**0.66**	**0.00**

Total Limited Emissions:

Total HAPs (tons/yr)
0.66

Reduction Factors for Core Making

Pollutant	Binder Reduction Factor
Phenol	0
MDI	0
Naphthalene	0.0325
Polymeric Diphenylmethane	0

METHODOLOGY

Max. Hourly Resin Usage Rate = Max. Sand Throughput to Mixer (tons/hr) * 1% (max. resin content) * 2000 lbs/ton
HAP Emissions from Resins = Max. Hourly Usage Rate * % HAP * Reduction Factor * 8760 hrs/yr * 1 ton/2000 lbs
Reduction factors obtained from the American Foundrymen's Society Publication entitled "Form R Reporting of Binder Chemicals used in Foundries", and refers to the weight percent of HAP that is emitted to the atmosphere.
Limited resin usage based on calculations for core making on page 11 of this Appendix A.

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Insignificant Activity
MM BTU/HR <100
Scrap Preheater

Company Name: Grede New Castle, Inc.
Address City IN Zip: 2700 East Plum Street, New Castle, Indiana 47362
CP: T065-6354
Plt ID: 065-00007
Reviewer: Trish Earls
Date: January 18, 2002

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Control Device:	Baghouse #7
		Control Efficiency:	99.10%
9.84	86.2		

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 *see below	5.5	84.0
Potential Emission in tons/yr	0.33	0.33	0.03	4.31	0.24	3.62
Controlled Emissions in tons/yr	2.9E-03	2.9E-03	0.03	4.31	0.24	3.62

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32
PM emission factors are condensable and filterable.

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton